OE FORM 6000, 2/69

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

ERIC REPORT RESUME

ERIC ACC. NO. ED 039 378			
CH ACC. NO. AA 000 556	P.A.	PUBL. DATE Apr 70	ISSUE RIEOCT70

IS DOCUMENT COPYRIGHTED? YES ☐ NO ☒
ERIC REPRODUCTION RELEASE? YES ☐ NO ☒
LEVEL OF AVAILABILITY I ☒ II ☐ III ☐

AUTHOR

TITLE

Teaching Strategies, Methods, and Materials. Papers Presented at the Annual International Convention of the Council for Exceptional Children (48th, Chicago, Illinois, April 19-25, 1970).

SOURCE CODE	INSTITUTION (SOURCE)
FGK19725	Council for Exceptional Children, Arlington, Virginia

SP. AG. CODE	SPONSORING AGENCY

EDRS PRICE	CONTRACT NO.	GRANT NO.
0.50;5.80		

REPORT NO.	BUREAU NO.

AVAILABILITY

JOURNAL CITATION

DESCRIPTIVE NOTE

114p.

DESCRIPTORS *Exceptional Child Education; *Teaching Techniques; *Instructional Materials; *Mentally Handicapped; Interdisciplinary Approach; Behavior Problems; Motor Development; Pictorial Stimuli; Cognitive Development; Interpersonal Competence; Camping; Multiply Handicapped; Physically Handicapped; Research Utilization; Pregnancy; Educational Programs; Educational Methods

IDENTIFIERS

ABSTRACT

The report of the proceedings of the convention of the Council for Exceptional Children in 1970 includes papers on the following topics: a workshop report on the team approach in using educational media, means of decelerating disruptive classroom behavior, the promotion of motor development in young retardates, the use of pictorial symbols to teach reading to the mentally handicapped, and cognitive training with the educable mentally handicapped. Discussions also concern the development of social skills with the educable mentally handicapped in secondary schools, the natural environment of the school camp experience, the benefits of research to the classroom teacher of the multihandicapped, research trends for the physical and health handicapped, public school services in a maternity home, and educational programs for pregnant girls. (JM)

GPO 870-390

ED 039 378

Teaching Strategies, Methods, and Materials

Papers Presented at the

48th Annual International Convention

The Council for Exceptional Children

Chicago, Illinois

April 19-25, 1970

Compiled by

The Council for Exceptional Children

Jefferson Plaza Suite 900

1411 South Jefferson Davis Highway

Arlington, Virginia 22202

AA 000 556

Table of Contents

Page

Workshop: The Team Approach to the Use of Educational Media 1
Dolph C. Welch and Others

Decelerating Disruptive Classroom Behavior 18
Robert E. Luckey and Others

Promoting Motor Development in Young Retardates 23
Beth Stephens and Others

Using Rebuses to Teach Reading to the Mentally Retarded 32
Richard W. Woodcock

Cognitive Training with the Educable Retarded: The Action 38
John William Hagen

Developing Social Living Skills with the Educable Mentally Retarded in Secondary Schools 46
Octavia B. Knight

Exploring the Natural Environment: The School Camp Experience 60
Carol Halliday

What Research Has to Offer the Classroom Teacher of the Multihandicapped Child 73
Nancy W. Steele

Research Trends: Crippled and Health Impaired 84
John D. Collier and Others

Public School Services in a Maternity Home 96
June Peterson

An Educational Program for Pregnant Girls 107
Vivian E. Washington

Workshop: "The Team Approach to the Use of Educational Media"

Dolph C. Welch (Chairman)
Administrative Assistant
The Educational Modulation Center
Olathe, Kansas

Gerry Hahn
Director, Parent Workshops
The Educational Modulation Center
Olathe, Kansas

Joyce North
Methods & Materials Consultant/Teacher
The Educational Modulation Center
Olathe, Kansas

Jane L. Omer
Hearing Conservationist
The Educational Modulation Center
Olathe Kansas

Presented by Dolph Welch

INTRODUCTION

EDUCATIONAL MODULATION CENTER: OVERVIEW

Good morning, and welcome to this section of the 48th annual CEC Convention entitled: The Team Approach to the Use of Educational Media.

Discussants from the Educational Modulation Center, Olathe, Kansas include Joyce North, Methods & Materials Consultant/Teacher; Jane Omer, Hearing Conservationist; and substituting for Morris Shrago is Gerry Hahn, School Psychologist and Director of Parent Workshops.

From the West Suburban Association for Special Education, Oak Park, Illinois, Cedric Benson, Director and Barbara Caracci, Consultant, and I am Dolph Welch, Administrative Assistant, at the Educational Modulation Center.

The "Team Approach to the Use of Educational Media" as utilized by the Educational Modulation Center will be presented in a general model and case study description of a multidisciplinary approach to both evaluation and individualized educational programming of pupils with learning problems in the regular class.

Those of you that found a packet of materials on your chair will discover that these materials will replicate some of the slides presented. In addition, you will find a card listing brickbats, bouquets, and questions which you are asked to complete at the close of the presentation and pass to the center aisle where they will be collected. An attempt will be made to answer all questions. If you are seeking information beyond that provided you may include your name and address and the information will be mailed to you.

Presentation

The Educational Modulation Center, often referred to as the "Mod-Center" is an E.S.E.A. Title III project sponsored by Unified School District No. 233, Olathe, Kansas and is directed by Dr. Gary Adamson.

The project is in its third year of operation and serves 10 unified school districts, the parochial schools, and the communities of Johnson, Franklin, Miami, and Douglas Counties in Northeast Kansas. There are approximately 16,000 students in the service area which is 45 miles in diameter. An additional 46,000 students in the northeast corner of Johnson County receive indirect services from the Center. Services provided by the

Mod-Center include a materials depository, in-service training for parents and teachers, Methods and Materials Consultant/Teachers, psychological evaluations, research, and dissemination of all available information pertaining to the project.

The purpose of the Mod Center is to effect a procedural model whereby children having educational problems may be provided with an efficient program and remain in the regular classroom.

The basic goals of the Mod Center are designed to effect new procedures for assisting children with educational problems and include the educational team composed of school psychologist, M & M, Hearing Conservationist; materials analysis, prescription, retrieval, cooperative special education programs; and research.

A student is referred to the Mod Center after his teacher(s) have exhausted all available resources in the local school district. The referral procedure is initiated by the classroom teacher with the cooperation of the building principal.

The teacher completes the appropriate form depending upon the reason for referral.

(a) The student identification form (which is found in the packet) is completed for the child whom the teacher suspects as being exceptional in some manner; who may need special class placement or other special service.

(b) The Student Referral Form (also found in the packet) is completed for the child who needs materials and corrective or remedial help and can be served in the regular classroom.

The form is received at the Mod Center and is routed to the office of Service Coordinator. Here his secretary assigns and records an identification number and sheet for the information file folder.

Contact letter No. 1 with enclosed postcard is then sent to the student's parents which requests their cooperation in providing corrective help for the student and to commit themselves to attending and participating in four in-service sessions during a ten-week period.

Upon receipt of the postcard indicating the parents' willingness to participate, the referral is assigned to a school psychologist for evaluation.

To discuss the psychological evaluation procedures, Gerry Hahn.

Presented by Gerry Hahn

PSYCHOLOGICAL EVALUATION

The school psychologist at the Educational Modulation Center administers an initial battery of tests to determine a referred child's mental ability, general achievement level, and the presence of personal and/or social adjustment problems. In order for most children to receive services of our Methods and Materials Consultant/Teacher, they must have at least average intelligence and must be academically retarded one to two years below what is expected for their mental age. The child must not be severely emotionally disturbed or have severe neurological impairments, but he may exhibit behavior or adjustment problems which are not severely disrupting to himself or his class.

The standard battery that the psychologist administers includes the Wechsler Intelligence Scale for Children, Wide Range Achievement Test, Bender-Gestalt, and Draw-A-Person. On occasions, other intelligence tests and personality tests may also be utilized when appropriate.

If the child's score is below average in intelligence and does not qualify for service, general recommendations are made to the teacher about materials that could be of use in planning an individualized program. A recommendation is also made to the teacher to consult with the M & M and to visit the Center to peruse educational materials.

If it is appropriate, the child is recommended for special education class placement. The school psychologist may find it appropriate, based on tests given, to make recommendations to outside agencies, such as mental health centers, speech clinics and so forth. He may also recommend complete hearing evaluation at this time.

Certain children are referred to the Center because they are primarily behavior problems rather than learning problems; that is, they may be achieving at their expected mental age but are evidencing behavior problems which are disruptive to themselves and to their class. In this case, the school psychologist works directly with the teacher, child and parents. The psychologist engages in counseling on a regular basis as long as it seems appropriate and aids teachers and parents in establishing child management procedures.

Once it has been determined through psychological evaluation that the child meets EMC criteria for M & M service as a learning disabled child, the findings are included in a psychological report which is shared with the Methods and Materials Consultant/Teacher who has been assigned to the case by the service coordinator.

The psychologist may inform the M & M that, for example, the vocabulary subtest of the WISC may indicate poor vocabulary; thus he might recommend to the M & M that this should be further investigated and vocabulary development materials prescribed.

The psychologist observes the child's behavior during the testing and may discover that when the child is motorically involved, using his hands or active in some other physical manner, he is able to attend much better to the task at hand. Therefore, he may recommend that the M & M investigate materials that would require the use of the pupil's hands or other physical activity.

Testing results may also indicate that the child feels very insecure in group activity. This may mean that initial programming of the child should be centered around individual activities with group activities being slowly phased in.

As a member of the educational team, the school psychologist works closely with the M & M during the ten week of intensive service to the learning disabled child. He engages in supportive therapy with children and offers ideas and suggestions to M & M's with respect to child management and educational planning. In this respect, the psychologist acts as a consultant to the M & M who is the primary professional manager of the child's program. The school psychologist also conducts parent in-service workshops and is available during teacher in-service workshops to confer with teachers and educators.

PARENT-TEACHER WORKSHOP

Early in the project it was found that to better bring about the desired change in children, it would be necessary to have not only the teachers, but also the parents become fully involved in their child's educational program. Therefore, a series of four parent workshops and four teacher workshops were established to run concurrently, but separately. The four meetings are spread over a seven week period to coincide with the time the child is receiving assistance from the Methods and Materials Consultant/Teacher.

The basic format of each workshop is divided into two parts. Each workshop begins with a general meeting, directed by a school psychologist. In the general meeting, the presentations consist of lectures, slide presentations, use of overhead projector and open discussions. At the termination of the general meeting, the parents and teachers have "mini" meetings with their Methods and Materials Consultant/Teachers (M&M's). The same format is utilized over the four workshops of having a general meeting and then meeting individually with their Methods and Materials Consultant/Teacher.

During the first three meetings, parents come to the Center in the evening and teachers meet in the afternoon. For the fourth meeting, the parents and teachers meet together for further discussion and planning.

The teachers receive release time from their schools to come to the meetings in the afternoons during the first three meetings. They have an opportunity to receive one hour's graduate credit from the University of Kansas if they so desire. Teacher workshops are centered around two areas:

1. Behavior management

2. Materials analysis and prescribing individualized educational programs

Both teachers and parents are required to complete a project using behavior management principles. The emphasis is on academic behaviors, but parents and teachers also work on social behavior.

During the first workshop the teachers receive a presentation related to the theoretical background of behavior modification. The parent presentation is less technical.

The basic approach of the workshops is that behavior is learned and that children emulate their parents' behavior. Also, children who are reinforced and succeed in the academic areas, develop better self-concepts and improved academic skills.

Parents and teachers are instructed on how to identify and record specific behavior of concern for a one week period.

During the second workshop, the parents and teachers learn about the use of consequences and materials to change behavior in the home and classroom. Certain consequences that are readily available to the teachers and parents are emphasized. These include such things as praise, timing a youngster on his work, graphing, free time, etc. Even a smile can be a consequence; for example, when husband smiles at wife for fixing a good meal---.

The third sessions include a review of the previous techniques learned and an elaboration of the types of consequences such as the use of extrinsic or material consequences sometimes necessary in establishing a behavior. Some need real concrete consequences! Teachers share with other teachers at this time the results of their project to date and make any necessary changes or modifications of their program. The parents follow the same procedures.

The fourth meeting is a short general meeting with both parents and teachers present. The teachers and parents meet with their M & M's to share their accomplishments and the projects they have completed on their child. They plan for future means of meeting the needs of the child.

JOYCE

Presented by Joyce North

METHODS & MATERIALS CONSULTANT/TEACHER

Shortly after a pupil has been assigned, the M & M arranges an appointment to visit with the building principal and referring teacher. Purpose of the visit is to review service procedures and other information relative to the student or parents. A time is also arranged to observe the student in a classroom situation.

Following the classroom observation, a short conference is held with the student to explain the reason for referral and what we hope to accomplish with his cooperation. The role his parents, teachers, and the M & M will play is also discussed. At this time the student is asked to relate (if possible) his likes and dislikes and his strengths and weaknesses as he sees them in relationship to his academic progress. The M & M impresses upon the student that she is not giving him a test which he can pass or fail, but the results tell us how best to help him. Overly anxious students are sometimes relieved to learn that the results will be discussed with them before they are discussed with teachers or parents.

A parent conference is arranged shortly before or at the very early stages of testing. A home visit is made whenever possible. Some parents feel more comfortable in their own home and find it easier to discuss their child's problems. The M & M gains useful insight into the home situation and obtains needed family information. The purpose of the visit is:

1. To establish rapport and a working relationship with parents

2. To give parents a brief overview of the Mod Center and discuss their responsibilities while attending four parent meetings. Parents are required to work with their child daily, and keep careful records of their child's progress.

Now the M & M is ready to begin the educational diagnostic testing. Thirty to forty minute sessions are scheduled daily until the evaluation is completed. This usually takes from three to five hours depending upon the child and the extent of the deficits. Standardized tests, as well as tests written by members of the Mod Center were used to evaluate the child's ability to do operational academic tasks. The informal inventory analyzes the student's skills in the following areas: Readiness, reading and arithmetic. During the testing sessions, the M & M is alert for clues that would indicate a need for further evaluation of hearing, speech, vision or referrals to outside agencies such as the Mental Health Clinic or local medical centers. Following the testing session each day, the tests are scored and the results discussed with the teacher, and they tentatively plan methods and possible materials to use in remediation.

At this time, it might be well to select one individual case and follow it to its conclusion. Rocky has (7) different teachers. He is in remedial reading and math classes. The referring teacher listed several difficulties. Among them were word attack, understanding of math concepts, listening, short attention span, failure to follow directions, and failure to listen. The teacher sees Rocky as too immature for his present grade level. Rocky was referred by his homeroom teacher who had him only a short time each morning and for short periods during the day when he was preparing to move on to another class. He was having difficulty in getting ready to change classes and would often be late to his next class. The School Psychologist's findings indicated his scores on the WISC were Verbal IQ 97, Performance IQ 93, and Full Scale IQ of 95.

On the Wide Range Achievement Test he scored 2.6 in Reading, 2.9 in Spelling, and 3.9 in Math.

Rocky's mother checked numerous items on the parent questionnaire to describe him as she sees him in the home. Among them were:

1. Nervous
2. Lacks self-confidence
3. Inattentive, preoccupied
4. Does not like school
5. Irresponsible
6. Cannot concentrate or sustain effort
7. Easily discouraged

The testing results and possible remediation areas are discussed with the student. If the student has a preference as to the deficit area he would like to begin with, his preference is taken into consideration before planning the overall prescription.

Evaluation of the diagnostic test data indicated deficits in Readiness, Reading, and Math. The readiness test indicates a deficit in the auditory attention for unrelated words and identifying hidden objects. These results support his teacher's observations of a short attention span and his failure to listen. On the Reading portion of the test, Rocky was not able to print all of the letters of the alphabet or to name them from memory.

He had difficulty in writing the letters in the alphabet. He knew only 542 of the 1,186 sight words given him. He was having great difficulty with initial and final consonants, vowels, blends and digraphs, Prefixes, suffixes and syllabication were also recorded as deficits.

In view of a significant deficit in auditory attention and the fact that he fails to listen, Rocky was referred to the Hearing Conservationist for an evaluation. To discuss the evaluation, its results and implications for the classroom teacher---- Jane Omer.

Presented by Jane Omer

Audiological Examination
(Recommendations for Teachers (M&M) and Parents)

Audiological testing is done in the test facility at the Kansas School for the Deaf. This facility includes a soundproof booth and a clinical audiometer. Hearing increases and decreases in minute steps and one sound can be obscured by another when they occur at the same time. A soundproof room controls these conditions. The clinical audiometer makes it possible to test the level at which a student first hears speech and how well he understands speech--discriminates speech--when it is at a comfortable loudness level. Loudness levels are reported in a unit of loudness called decibels. Our student first understood speech at 23 decibels. His 84% score on the ability to discriminate speech sounds showed that out of 50 words he correctly discriminated 42 words. We have found students scoring in these ranges to be retarded in their vocabulary development since they do not hear speech as do other children.

All of these results were interpreted to the mother at the time of testing. On-the-spot instruction for utilizing the visual clues of speech were given to both Rocky and his mother. He was directed to watch the lips of the speaker. His mother was given the at-home task of conditioning her son to watch the lips of the speaker by 1) first calling his name and 2) completing the conversation only if her son observed her lips.

A report of the findings was forwarded to all concerned, the teacher, the principal, and the school nurse who assumed the responsibility for medical referral. The Methods and Materials Consultant and the Hearing Conservationist collaborated on the language aspects of the educational program.

The hearing conservationist was included in the planning session between the teachers and the M&M. Suggestions were given for room arrangments that would afford our student an opoortunity to observe not only the lips of the teacher but also each student. Two arrangements are shown here: 1) one with the students' and teacher's desks in a circle 2) another with the student at the side front seated at an angle allowing student to see the teacher and the students.

Another suggestion was to use the overhead projector in place of the chalkboard whenever possible so that the teacher could face the class instead of having his back to them.

We encouraged the use of visual aids whenever possible to help Rocky do the auditory and visual matching necessary for vocabulary development. He was having a very difficult time in social studies. More words with abstract meanings are encountered in social studies such as the words "government," "communication," etc. A sequential program of films was provided through Captioned Films for the Deaf to correlate with social studies. Captioned Films do have captions--like foreign movies--on the bottom of the picture. Thus Rocky was hearing plus seeing the written symbols. He was receiving two inputs through the visual channel -- the picture and the written symbols of language plus an input to the auditory channel (the sound track of the movie).

Suggestions were made for utilizing the school's audio-visual equipment to provide these three types of input in multiple ways. Input for hearing can be provided by:

oral language
phonograph recordings
tape recordings
the sound track of films
the sound portion of television

The visual aspects of language can be presented in two basic ways: 1) by seeing the lips of the speaker as he speaks and 2) by seeing the written forms that symbolize speech. The captions on the films were this type. By facing the class the teacher provides opportunities for speechreading. When he presented written or printed words on the overhead projector, opaque projector or on slides (as we are doing now) he was using the second method of presenting language visually.

Of course the other visual input was accomplished with real objects and actions, filmstrips, films, pictures, drawings, slides, television and videotapes if they are available. The teachers seem to appreciate the formula we gave them to help them remember the three inputs.

(A + VLS + SE) = LCS

AUDIO + VISUAL LANGUAGE SYMBOL + SENSORY EXPERIENCE

Repeated +

LANGUAGE CONCEPT STORAGE

Amplification through headphones was used to amplify Rocky's hearing slightly if the headphones themselves were free of distortion and provided amplification through all the frequencies of the speech range. Many did not.

This, then was the program provided for language learning. Gradually we hope to close the educational gap created for Rocky by his hearing impairment by correlating the teaching of language with subject matter. He is now 24 months behind his chronological age in vocabulary development. He reached this point over a period of nine years,--his current chronological age. We now hope to reverse this trend--but it will take time.

Joyce will tell you more about the teacher conference.

METHODS & MATERIALS CONSULTANT/TEACHERS (CON'T)

The completed diagnostic evaluation is reviewed to point out the specific areas of concern. Together the teachers decide what areas to concentrate on, the types of materials and equipment they prefer, and appropriate methods to use to introduce and teach specific skills.

In selecting materials to be used in an individual program in the classroom, the M & M works directly from the test to the Materials Laboratory. The Lab contains an abundance of educational materials which can be used in working with children. The Prescriptive Materials Retrieval System is the tool used in selecting materials for specific purposes from the great mass of available materials. To use the Retrieval System, a list of criteria is compiled to define the exact type of materials needed to fulfill the prescription. A descriptor card, which meets the criteria compiled, is placed on the light box viewer along with a descriptor card for the appropriate mental age, and a descriptor card for the type of format desired. The number of light holes showing through indicates the number of materials with the desired qualifications. The numbers from the grid are noted and the descriptive analysis sheets are pulled from the files and studied. The shelf numbers of the items are given on the analysis sheets and the most appropriate materials can then be pulled from the shelf.

The teachers felt it important for Rocky to begin working in the following areas:

1. Getting to class on time with books and pencils.

2. Kindergarten through 3rd grade sight words.

3. Final consonant sounds.

4. Spelling

5. Penmanship

The homeroom teacher kept a record of the number of times Rocky was ready to move on to the next class without having a special reminder. She later made her recordings known to Rocky and also used praise to reinforce his getting to class on time.

Write and See Handwriting workbook by Lyons and Carnahan was used as a supplementary workbook because it gave Rocky the needed repetition drill with immediate feedback concerning his errors. The workbook requires very little teacher time and seems to have a high interest level for most children.

Because of the size of classes and the limited time the spelling teacher had to work with Rocky she felt, if at all possible, we should not reprogram his but continue to use the workbook at grade level. Rocky was failing in his spelling class because he was unable to spell the words on his lists each week. He was not able to take dictation because he couldn't spell the other words in the sentences and was unsure of the punctuation. These difficulties were compounded by his handwriting problem. The study procedures were used with Rocky which are enclosed in the packet.

A home study program was set up as an integral part of the parent workshop. As you will see, the parents play a vital role as members of the educational team.

Rocky's deficit areas were made known to the parents along with current plans for remediation at school. The mother selected sight words and consonant sounds along with the spelling procedures to work on at home.

Sight words 1st through 3rd grade

1. Mother flashed total list of sight words to determine the unknown words to study.

2. Every night he studied 6 words.

3. After he finished studying the new words, they were flashed to him along with previously studied words.

4. The mother kept a record of the number of new words learned each day.

Consonants and vowel sounds.

Rocky knew 21 of 38 initial consonant sounds, 20 of the 26 ending consonant sounds and 5 of the 12 vowel sounds.

Talking Letters flashcards by
were selected because it was felt that this mother could use them effectively with relatively few errors. The sounds are learned by association and a story appears on the back of each card.

Spelling

Rocky's mother was given an extra copy of the teacher's guide for the spelling text which contained the spelling words and sentences for dictation. Rocky started on Friday to learn to read and spell his words for the following week. When he was able to spell all of the words on the list, he then began copying the sentences his mother would dictate the sentences to him.

After materials have been selected the M & M first works with the individual student using the materials to insure their functionalism and to establish appropriate methods to use.

Some time is spent each week with the child in diagnostic teaching during the 10 week service period. The M & M continues to consult with the teacher and supply needed materials for the remainder of the year. In closing, I would like to read to you Rocky's Mother's response to the question "What are your feelings about your child's progress?"

Rocky has made unbelievable progress. I believe for the first time in his life he is enjoying success. His reading has improved but, more important, his social behavior, his attitude, appearance, and health have improved. He is more confident.

He is beginning to do school owrk willingly on his own now without constant supervision. He smiles and laughs a good deal and is eager to learn and looks forward to school each day.

Rocky has especially enjoyed the writing materials Mrs. North has brought.

It's good to see Rocky happy!

Presented by Dolph Welch

SUMMARY

The intent of this presentation was to provide insight into the methods and procedures used by the Educational Modulation Center in its attempts to render service to Learning Disabled children in the regular classroom and to provide teachers and parents with materials and consultation for the remainder of the school year.

Decelerating disruptive classroom behavior

Robert E. Luckey

National Association for Retarded Children

F. Barry Orr   Barbara E. Patterson   Max R. Addison

Denton (Texas) State School

Abstract

An easily administered token reinforcement program was used by one teacher without a large supportive staff to decrease significantly the disruptive classroom behavior of six educable institutional residents who had a history of chronic "emotional" disturbance. With each S serving as his own control, baseline data was compared to post test results during reinforcement, extinction, and renewal of reinforcement.

Behavior modification principles derived from laboratory experiments and tested in natural settings (Barnard & Orlando, 1967) are being increasingly recommended for use in the school classroom (Clarizio & Yelon, 1967; Ross, 1967). Token reinforcement strategies have received particular attention in that they have been used to significantly increase levels of academic productivity (e.g., McKenzie, Clark, Wolf, Kothera & Benson, 1968) and to decrease maladaptive behaviors of retarded and "emotionally" disturbed school children (e.g., Birnbrauer & Lawler, 1964; Birnbrauer, Wolf, Kidder & Tague, 1965; O'Leary & Becker, 1967; Orlando, Schoelkopf & Tobias, 1967; Wolf, Giles & Hall, 1968). However, as Lovitt (1968) has pointed out, teachers may react negatively to suggestions that they initiate token programs because previously reported experimental classrooms were unusually small with one teacher, several aides, additional observers, complicated record keeping, and elaborate measurement requirements. Although the primary purpose of the present experiment was to test further the effectiveness of using token reinforcement to decelerate disruptive classroom behavior, another major objective was to design an easily administered token program that could be incorporated into the teacher's normal duties without supportive assistance from a large auxilary staff.

Method

Subjects

The subjects (Ss), grouped as a school class four months prior to the experiment, were six educable institutional residents who emitted at high frequency behaviors considered extremely disruptive to normal classroom routine. Although clearly defined classroom structure and behavioral limits set by the teacher appeared to slightly reduce overall disruptiveness, the Ss continued to emit undesirable classroom behavior at a high and relatively stable rate. At the time of the experiment the Ss had the following descriptive characteristics.

S1: An 11-year-old female caucasian institutionalized for 4.2 years with mild retardation (WISC: FSIQ = 61) of uncertain etiology, hyperkinetic syndrome, and periodic ingestion of articles such as pins, keys, rings, and tacks. Classroom behavior varied from childlike submissiveness to episodes of extreme activation wherin she throws herself to the floor, kicks, bites, and cries.

S2: A 15-year-old female caucasian institutionalized for 4.6 years with mild retardation (WISC: FSIQ = 54) of uncertain etiology, destructiveness, cruelty to animals, and fear of sleeping alone. She demands an undue amount of attention from the teacher and continually talks, leaves her desk, and interferes with the activities of classmates.

S3: A 15-year-old male caucasian institutionalized for 4.6 years with moderate retardation (WISC: FSIQ = 47) congential cerebral defect, severe acne, and history of auto theft, shoplifting, and carrying a firearm. He responds negatively to all of the teacher's requests, exhibits restless, impulsive motor behaviors, and continually makes threatening remarks which are affectively inappropriate.

S4: A 13-year-old male caucasian institutionalized for 1.7 years with mild retardation (WISC: FSIQ = 54), unconfirmed neonatal brain damage, destructiveness, threats of suicide, and assault upon father with a knife. He is unproductive and "daydreams" in the classroom, and his usual response to direct questions is, "Have I done something wrong?"

S5: A 15-year-old male caucasian institutionalized for 4.3 years with mild retardation (WISC: FSIQ = 57), pickwickian syndrome, extreme obesity, undescended testicles, excessive cleanliness, preoccupation with fire, and olfactory hallucinations. He constantly demands attention and reassurance from the teacher, and he becomes extremely combative when his egocentric desires and goals are thwarted.

S6: A 15-year-old male caucasian institutionalized for 4.5 years with mild retardation (WISC: FSIQ = 57), of uncertain etiology, stereotyped body rocking, and bizarre mannerisms. He prefers to sit distant from his classmates and occasionally tries to leave the classroom. The activities of others are inappropriately interpreted as threats to his well-being and he reports that classmates call him derogatory names. His academic productivity is strikingly erratic with periodic displays of abilities significantly beyond his overall functioning level.

Procedure

A staff psychologist observed the class for one week in order to derive a maximum list of disruptive behaviors emitted by the Ss. The list was then reduced to seven behaviors which had a frequency of at least one occurance per hour (i.e., failing to raise hand for permission to speak, disturbing the class with irrelevant talk, not paying attention to the teacher, asking for reassurance, not completing assigned work, failing to comply with the teacher's direct requests, and leaving desk at inappropriate time). Two staff psychologists who had no other contact with the experiment obtained one-hour baseline frequency ratings on four consecutive days using three minute time samples; inter-rater reliability for the four days was found to be high (r = .98).

The reinforcement value of the tokens (small pieces of colored plastic) was established after baseline data was collected. Two tokens were dispensed by the teacher to each S as they arrived at the classroom. The Ss were allowed immediately to "spend" the tokens at a token store in the classroom. Tokens could be redeemed for the priveledge to use (in the classroom) small portions of cosmetics, deodorants, hand lotions, facial medications, and other grooming aides not readily available at the Ss' dormitories. Dietetic cookies were also provided occasionally. On the third through the fifth class days dispensing of tokens was made contigent upon arriving at class on time.

The teacher informed the Ss on the sixth class day that they could earn up to four tokens each day if they would stay at their desks, do as the teacher asked, work hard, and not talk without first raising their hands for permission to speak. A delay of 15 minutes was established between arrival at class and dispensing of tokens for redemption, interval consistancy was maintained using a standard timer with a bell. Thereafter, the delay interval was increased in five minute increments contigent upon a 75 percent or higher decrease in disruptive behavior during a given week. Within 68 class days the delay interval had been extended to

55 minutes.

The first post-test consisted of replicating with one rater on days 64 through 68 the method used to obtain baseline data. When the first post-test was completed, a ten day extinction period began (i.e., absence of tokens and token store) and the second post-test ratings were obtained. The extinction period was followed by renewed reinforcement for ten additional days and the final post-test.

Results

Table I shows that the seven disruptive behaviors decreased significantly ($t = 3.064$; $P < .05$) for all Ss during a 55 minute class period after 68 days of token reinforcement. Three Ss continued to exhibit behavioral decreases during the extinction period; however, overall group change during the extinction failed to reach statistical significance ($t = .986$). When tokens were reintroduced for ten days, another significant deceleration in disruptive behavior below baseline and first post-test frequency levels occured ($t = 4.336$, P .01; $t = 4.509$, .01).

Table I

Mean Frequency for Seven Disruptive Behaviors

(Three minute time samples: one hour X four days)

Ss	Baseline	Tokens*	Extinction	Tokens**
1	32.00	20.00	3.75	.50
2	63.25	7.33	5.33	4.00
3	67.00	8.25	15.00	1.00
4	29.00	2.50	4.00	.00
5	17.00	2.75	2.75	.00
6	19.50	13.75	3.50	1.00

* decreased=28.86; $t=3.064$, $P < .05$

** decreased=36.88; $t=4.336$, $P < .01$

References

Barnard, J.W. & Orlando, R. Behavior Modification: A Bibliography, Nashville: Institute on Mental Retardation and Intellectual Development, George Peabody College, 1967, 4, 3.

Birnbrauer, J.S. & Lawler, Julia. Token reinforcement for learning. Mental Retardation, 1964, 2, 275-279.

Birnbrauer, J.S., Wolf, M.M., Kidder, J.D. & Tague, Cecelia. Classroom behavior of retarded pupils with token reinforcement. Journal of Experimental Child Psychology, 1965, 2, 219-235.

Clarizio, H.F. & Yelon, S.L., Learning theory approach to classroom management: rationale and intervention techniques. Journal of Special Education, 1967, 1, 267-273.

Lovitt, T.C. Operant conditioning techniques for children with learning disabilities. Journal of Special Education, 1968, 2, 283-289.

McKenzie, H.S., Clark, Marilyn, Wolf, M.M., Kothera, R. & Benson, C. Behavior modification of children with learning disabilities using grades as tokens and allowances as back up reinforcement. Exceptional Children, 1968, 34, 745-752.

O'Leary, K.D. & Becker, W.C. Behavior modification of an adjustment class: a token reinforcement program. Exceptional Children, 1967, 33, 637-642.

Orlando, R., Schoelkopf, Ann M., & Tobias, L. Tokens As Reinforcers: Classroom Applications by Teachers of the Retarded. Nashville: Institute on Mental Retardation and Intellectual Development, George Peabody College, 1967, 4, 14.

Ross, A.O. The application of behavior principle in therapeutic education. Journal of Special Education, 1967, 1, 275-285.

Wolf, M.M., Giles, D.K., & Hall, V.R. Experiments with token reinforcement in a remedial classroom. Behavior Research and Therapy, 1968, 6, 51-64.

PROMOTING MOTOR DEVELOPMENT IN YOUNG RETARDATES

Beth Stephens
Paul Smeets
Bernice Baumgartner
William Wolfinger

Introduction

Improvement in gross and fine motor skills in young mentally defective children, especially in those who are considered to be severely retarded, largely depends on repeated demonstrations, repeated training and repeated opportunities. When enjoined to formulate a motor development program for institutionalized trainable and custodial retardates, we also realized [illegible] individually planned programs, containing activities commensurate with the individual's level of present functioning, were indicated. As this program was an exploratory one, the decision was made to provide trial training to a small group for a period of three months and to evaluate gains, if any, so that the knowledge, provided by this project could be applied in devising subsequent programs. Because a concise and efficient tool for assessment was desired, an adapted screening-device (Smeets' Adapted Scale) composed of items of various infant tests and developmental scales (Gesell, Merrill-Palmer, Cattell and Vineland Social Maturity Scale), was designed. Consideration was given to four areas of motor-functioning, i.e., gross motor, balance, arm-hand coordination and manual dexterity. (Hand-out).

Methodology

The sample consisted of 24 subjects (12 male and 12 female) who were randomly selected from a unit which contained trainable and custodial retardates, ages 7 to 12. Twelve subjects (6 males and 6 females) were

TABLE 1

SMEETS' ADAPTED MOTOR DEVELOPMENT SCALE

NAME: ______________________ DATE: __________

SEX: ________ C.A. ______________

	GROSS MOTOR	BALANCE	ARM-HAND COORDINATION	MANUAL DEXTERITY
12M	Walks, one hand held. (Gesell)	Stand alone. (Vineland)	Beats two spoons together at least 3 times. (Cattell)	Marks with pencil. Holds pencil in fist. (Cattell)
18M	Walks, seldom falls. (Gesell)	Kicks large ball without holding well. (Gesell)	Throws ball; any definite fling. (Merill-Palmer)	Turns pages: 2-3 at once. (Gesell)
24M	Walks upstairs alone. (Vineland)	Imitates standing on one foot. Lifts foot. No support. (Merill-Palmer)	Eats with spoon. (Vineland)	Attempts to fold paper. Any fold is a plus. (Cattell, Merill-Palmer) Turns pages singly. (Gesell)
30M	Jumps with both feet. (Gesell)	Walks on tip toe. (Gesell)	Eats with fork. (Vineland)	Holds crayon by finger. (Gesell)
36M	Walks downstairs one step per tread. (Vineland)	Stands on one foot. Real balance for a moment. (Gesell)	Pours well from pitcher. (Gesell)	Closing fist and moving thumb. (Merill-Palmer)
42M	Making Broad jump, distance of 1 ft. to 25 inches. (Handout)	Stands on one foot, for 2 seconds. (Gesell)	Puts on sweater. (P.M.S.)	Buttons coat or dress. (Vineland)
48M	Walks downstairs, alternating feet last few steps. (Gesell)	Stands on one foot more than 4 seconds. (Gesell)	Throws ball overhand. (Gesell)	Opposition of thumb and fingers. One successful trial out of 3. (Merill-Palmer)

randomly assigned to the experimental group and twelve (6 males and 6 females) to the control group.

Each child's level of motor development was determined through the use of the Smeets' Adapted Scale and, as far as he exceeded the 48 month level, the Motor Integration and Physical Development Sub-Scale of the Valett Developmental Survey (1966).

Review of the experimental group's performance suggested a division into two groups for training i.e., those whose performance was below the 30 month level and those whose performance was above this level. However, few subjects had achieved comparable levels in the four areas measured by the adapted scale. As a result, a subject did not necessarily remain in the same group for all four training activities. A typical example of the irregular development which characterized the subject was demonstrated in the performance of an eight-year old mongoloid boy (table 1), a child more adept in the areas of gross motor and balance than in arm-hand coordination or manual dexterity.

Table 1

Performance Profile of Eight Year old Male

Gross Motor
36 months - walks downstairs
42 months - does not jump on one foot

Balance
24 months - lifts foot
30 months - does not walk on tiptoe
36 months - stands on one foot
42 months - stands on one foot for two seconds
48 months - does not stand on one foot for four seconds

Arm-Hand Coordination
24 months - eats with spoon
30 months - does not eat with fork

Manual Dexterity
18 months - turns pages 2 or 3 at time
24 months - does not fold paper or turn pages singly

In scheduling training, the experimental group was divided into two subgroups, each containing six subjects. A teacher and three tutors worked one hour a day, five days a week with each of the two subgroups. The following listing demonstrates the approach used in programming training.

Activities

GROSS MOTOR:

Rolling

Group 1 - (performance below 30 month level) Demonstrate roll; manipulate a roll.

Group 2 - (performance above 30 month level) Have children roll over and over outside on grass or inside on bed.

Crawling

Group 1 - Demonstrate crawling; have children crawl forward and back; crawl toward goal; crawl homo-lateral and cross diagonal; crawl through tunnel, around chair obstacle.

Group 2 - Demonstrate crawling; follow course laid out by paper plates; crawl between boards, on 12" board.

Walking - Running

Group 1 - Walk to object or person and return or pull toys or wagon.

Group 2 - Run to object or person; walk forward, backward, sideways; walk on randomly placed paper plates.

Jumping

Group 1 - Hold child's hand (or body) and jump with him; step over objects.

Group 2 - Jump over low object; jump to obtain object above him; jump down from box; broad jump; jump rope.

Hula Hoop

Group 1 - Help child put hoop over himself, move and step out.

Group 2 - Work to keep hoop moving; does not necessarily succeed.

Climbing

Group 1 - Climb on chair, box or bed.

Group 2 - Climb step ladder, stairs, or over series of boxes.

BALANCE:

Trampoline

Group 1 - On mattress.

Group 2 - On trampoline.

Balance Board

Group 1 - Crawl or walk on slightly elevated balance board.

Group 2 - Crawl or walk on board elevated one foot or more; later while holding ball.

Tiptoe and Skipping

Group 1 - Demonstrate tiptoe; play game to promote ability; stand on tiptoe and run forward and backward.

Group 2 - Tiptoe; follow leader (pattern of circles, loops, etc.); when mastered, move to skipping; stand on tiptoe while counting to ten.

Walking

Group 1 - Walk on mattress.

Group 2 - Walk on wide part of 2" x 6" board; then 2" x 4" board.

Balance on One Foot

Group 1 - Kick ball held two or three inches from floor.

Group 2 - Participate in contest; stand on one foot; when music stops, hold position until it starts again.

Walking on Tires

Group 1 - Flat on ground.

Group 2 - Sunk in concrete (hold to fence).

ARM-HAND COORDINATION:

Throwing

Group 1 - Roll ball on floor; throw sponge or textured ball; later, throw to other person.

Group 2 - Throw and catch medium-sized ball; later, ring-toss game; bean bag; bucket throw (throw into bucket); still later, bounce ball.

Angels in the Snow

Group 1 - Simple arm extension.

Group 2 - Alternate arm, leg, etc.

Tire Roll
Group 1 - Roll large can.

Group 2 - Roll tire or wheel.

Rhythm
Group 1 - Tap drums.

Group 2 - Beat simple pattern.

Bowling
Group 1 - Big ball and pins.

Group 2 - Smaller ball and pins.

Pouring - Sand and Water
Group 1 - Large container.

Group 2 - Reduce size of container; later, pour to certain line or level on container.

MANUAL DEXTERITY

Block Building
Group 1 - Align and stack two or three.

Group 2 - Pattern building -- bridge of three, houses, etc.

Clay
Group 1 - Roll ball; poke, roll squeeze, stick.

Group 2 - Put two pieces together to make shape; make specific object.

Sponge Play
Group 1 - Squeeze water from sponge; wipe.

Group 2 - Clean with sponge.

Crayons
Group 1 - Experiment with directional movements. (horizontal, vertical lines).

Group 2 - Simple geometric forms.

Stringing Beads
Group 1 - Demonstrate to child with big ones; guide hands.

Group 2 - After demonstration, little ones.

Cutting, Scissors
Group 1 - Learn to hold and cut paper in two.

Group 2 - Cut along line and then cut large objects.

Because some subjects frequently displayed self-stimulatory, stereotyped and/or severe disruptive types of behavior, attempts were made to stimulate interaction with objects and people. Remembering Bruner's (1966) three levels of teaching, (1) inactive (physical guidance of the child through motor activity), (2) iconic (demonstration of activity to subject prior to his attempt), and (3) symbolic (verbal explanation of task prior to subject;s attempt), training efforts were geared to the child's level of receptivity. In order to break habits of inattentiveness or misuse of objects, training for several of the subjects was on a one-to-one tutor-pupil ratio. In addition, spontaneous manipulation of objects and successive approximations were evoked and rewarded with cookies and candy. Connor and Talbot's (1966) scaling technique was used to analyze the degree of skill displayed by the subject when he was presented with activities. For example, members of the group exhibited various levels of performance when given the opportunity to cut with scissors: (1) some evidenced no interest, (2) others used the scissors for hitting or pounding, (3) while other attempted, but failed, to hold them correctly, (4) and others did hold them in a manner conducive to paper cutting.

Admittedly, it would be difficult to justify a prolonged use of a one-tutor, and sometimes a two-tutor-to-one pupil ratio. But one can argue for this initial period of daily, concentrated efforts if it seems to promote spontaneous interest in the manipulation of objects and self-initiation of activities. After the desired response is made and established in a more or less habitual way, hopefully the child will be ready to perform in small group situations.

Although no dramatic gains were expected to occur within a three month period of training, pre-and post-measures were obtained for each subject on the Smeets' Adapted Scale and on the Motor Sub-Scale of the Valett Survey. The mean scores were 26.83 for the experimental group and 25.00 for the control group. Despite the fact that the main increase for the experimental group was 5.83 versus 2.33 for the control group, the differences were found to be statistically not significant when subjected to analysis of variance procedures. Differences would be expected to become significant if the training period were continued for a longer period of time.

REFERENCES

Bruner, J. S. Toward a theory of instruction. Cambridge: Harvard University Press, 1966.

Connor, Frances P. and Talbot, Mabel, An experimental curriculum for young mentally retarded children. New York: Teachers College Press, 1966.

Valett, R. E. Valett Developmental Survey. Palo Alto: Consulting Psychologists Press, 1966.

USING REBUSES TO TEACH READING TO THE MENTALLY RETARDED

Richard W. Woodcock, Director of Research

American Guidance Service, Inc.
Circle Pines, Minnesota 55014

Since the acquisition of functional reading skill is a major learning objective for the mentally retarded and since this is an area of learning often beset with failure, special educators have been particularly interested in new reading approaches and materials. As new materials and techniques have appeared on the scene, they have been tried and often accepted more readily by the special educator than by the general educator who tends toward more conservatism in his response.

There has been considerable research on the efficacy of various approaches for teaching reading. The results of these studies have generally failed to show any marked or continued advantages of one approach over the other in well-controlled studies. For example, the Peabody-Chicago-Detroit Reading Project (Woodcock, 1967) compared six different approaches for teaching reading to young mentally retarded children. The sample for this study included 321 non-readers drawn from 85 special classes in Chicago and Detroit. The results of this study produced no significant differences among the mean achievements of the six groups after two years of instruction.

Much of the recent attention of researchers and teachers has been directed to the potential value of using symbol systems other than the traditional 26-letter alphabet in the early stages of reading instruction. Most notable in this respect has been the use of the Initial Teaching Alphabet (i.t.a.). Until recently, however, very little attention has been paid to the potential value of using pictorial symbols, or rebuses, to represent words during the early phases of beginning reading instruction.

The term "rebus" is derived from a Latin word which means "thing." Linguistically a rebus is a symbol or a picture which represents an entire word or a part of a word in contrast to a letter which represents a sound. Figure 1 presents an illustrative rebus vocabulary and a short passage written in rebus.

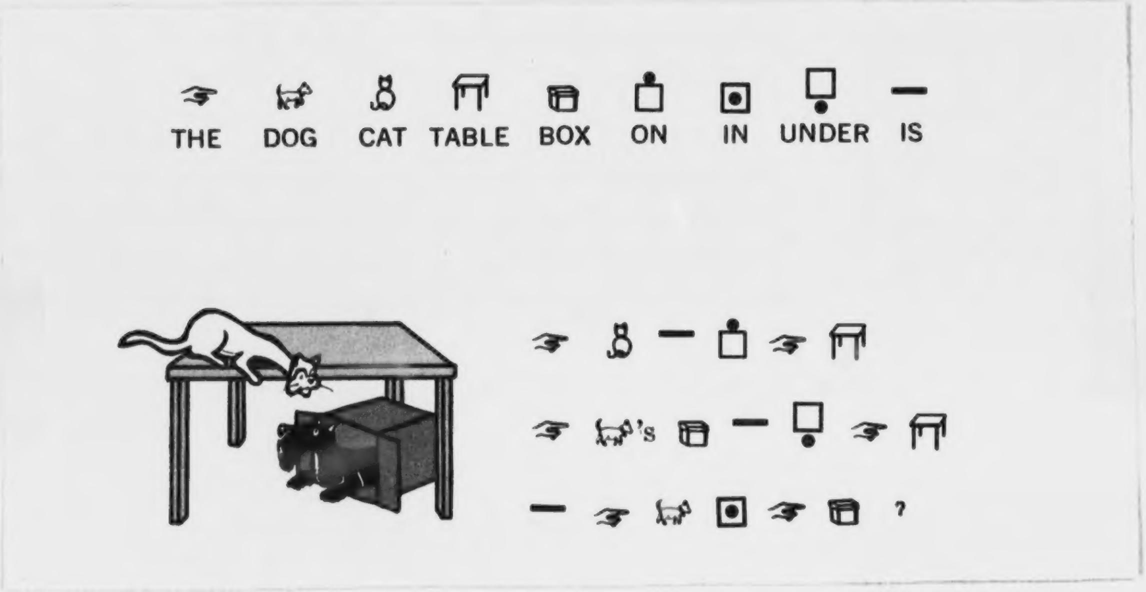

Figure 1. Illustrative rebus vocabulary and passage.

Language historians have noted that the earliest forms of written communication were pictographic in nature. Thus, a parallel can be observed between the use of pictorial symbols to represent words during beginning reading instruction and the use of pictorial symbols in the historical development of written language. Rebuses are used occasionally, though incidentally, in children's literature and some preprimers. Rebuses have even been suggested as a functional reading system for use by severely retarded individuals (O'Connor, 1964).

Although, alphabetic systems of writing are more efficient after the initial stages of learning to read, a rebus system with a limited vocabulary is remarkably easy for a child to learn. A young non-reader can learn 20 or 30 rebuses and then proceed to read passages at sight which are written with these rebuses - all in a matter of a few minutes (Woodcock, 1968). Such observations with preschool and mentally retarded children lead to developing instructional programs capitalizing upon this ease of learning to read rebuses - in contrast to the relative difficulty of learning to read spelled words.

Two instructional programs, utilizing rebuses, may be of interest to the special educator. One of these programs, under development and now presently in the field-testing stage, is called Language in Space and Time (LIST) (Horton, Davies, & Woodcock, n.d.). This program is intended for use as a general language development program for children whose language is poorly developed or even absent. The Peabody Rebus Reading Program (REBUS) (Woodcock, Clark, & Davies, 1969) is a second instructional program utilizing rebuses. In REBUS, the pupil first learns to read using a vocabulary of picture symbols or rebuses. After learning the basic skills of the reading process, the pupil proceeds through a controlled transition program.

Language in Space and Time

The purpose of LIST is to facilitate the development of early language skills, particularly in respect to the emerging syntactical constructions in the developing language of a child. The program is concerned with the oral language skills learned by normal children before the age of four.

LIST is designed to follow the developmental sequence of expressive language development. The work of Lee (1966) and of Menyuk (1969) have served as guides in determining the sequence of syntactical constructions introduced in the program. Rebuses are used extensively as the vehicle by which vocabulary and syntactical constructions are introduced and analyzed. Whenever a new word is introduced it is presented with its rebus. Whenever phrases or longer statements are presented, they are constructed with rebuses in a pocket chart -- where they remain to be studied and analyzed by the pupil. Another feature of LIST is its incorporation of the "combination" approach from the field of deaf education. Rebus statements and vocabulary aural mode are presented simultaneously in the aural mode as well as the visual. Children are encouraged to repeat the words and statements many times in the course of a day's lesson.

The list below indicates the sequence of vocabulary and typical syntactical constructions used in the early part of LIST:

Vocabulary	Typical Syntactical Constructions
chair	chair
the	the chair
John	John
's	John's chair
my	my chair
big	my big chair
this is	this is the big chair
not	this is not the chair
run to	run to the big chair

LIST does not assume any oral language competency on the part of the child at the beginning of the program. The purpose of LIST is to introduce the child to the basic vocabulary and syntactical patterns of spoken English. In addition to its use with the mentally retarded, LIST is intended for use with the hearing-impaired and other children who have developmental language deficits. Though LIST has not been developed as an instructional reading program, the use of rebuses results in the child learning many of the skills of reading. If desired, the child may move from LIST into REBUS.

Peabody Rebus Reading Program

The first rebus reading program was an experimental set of materials developed for use as one of the six approaches in the Peabody-Chicago-Detroit Reading Project. This set of materials was composed of eight readers, each consisting of about 60 - 80 pages of text with associated workbooks, teacher's guides and supplementary materials for each level of the program. At the completion of the experiment the children had been taught a vocabulary of approximately 150 rebuses, of which 100 had been transitioned into spelled words. The REBUS Program developed out of the experience with this experimental series of rebus readers. The instructional goals of REBUS approximate the readiness and preprimer objectives of traditional reading programs. The two characteristics of REBUS which particularly set it apart from traditional beginning reading programs are the incorporation of a programmed text format, and the use of rebuses as a link between spoken language and reading print.

The instructional materials used in the program include three programmed workbooks and two readers. Each page in the three programmed workbooks is divided into four panels or "frames." Book One and Book Two contain 384 frames each and Book Three contains 448 frames. Each frame presents the pupil with a learning situation requiring interpretation and subsequent selection of an answer from among two or three available responses.

In order to respond, the pupil dampens the tip of his pencil eraser on a moderately wet sponge or cloth and then wipes his eraser across the ribbed response area beneath the answer of his choice. If he has selected the correct answer, the ink in the response area will turn green. If he has selected a wrong answer, the ink will turn a shade of red. The pupil has been instructed that "green means go - go on to the next frame," and that "red means stop - stop and do the frame again." The red used for this purpose is actually a shade of violet. The combination of violet and yellow-green was selected following an evaluation of the shades most easy for color-blind subjects to discriminate.

In the two Rebus Readers, spelled words are systematically substituted for rebuses. The first time a word appears in traditional orthography it is paired with its equivalent rebus. This rebus is one-half size and is placed directly above the word in transition. In addition, a yellow background is printed behind the word each time it appears on the page in which the transition is being made and on the following page. This yellow background signals the child that a word key is available at the top of the page if he should need help with the newly transitioned word.

During the transition program, the pupil will alternate between Book Three and the readers. With certain exceptions, new words are introduced via the rebus method and words already learned are transitioned in the text of the readers. Book Three is used to practice the new vocabulary and skills presented in the readers and to extend the pupil's comprehension and interpretation skills.

Final Remarks

Two programs utilizing rebuses for teaching language skills to the mentally retarded have been developed. A program for developing basic language skills (LIST) is being field tested and should be ready for distribution in about a year. The program for teaching beginning reading skills (REBUS) has been available for about a year and is being used in many special education programs as well as with normal children at the kindergarten and first grade level. Both of these programs have demonstrated their effectiveness in developing oral language and reading skills with mentally retarded pupils. Throughout the pilot studies and field tests of both programs, the authors have followed a practice of testing the materials and procedures with children having language problems of a more severe nature than would be typical in the groups finally using the program. This practice has been followed in order to insure that the final program would be useable across a wide range of subjects. To date there have been no reported comparative studies using either of these programs. As such studies are reported, the relative effectiveness of approaches in language instruction will be known.

References

Lee, L. L. "Developmental Sentence Types: A Method for Comparing Normal and Deviate Syntactic Development," Journal of Speech and Hearing Disorders, vol. 31, November, 1966.

Menyuk, P. Sentences Children Use. Cambridge, Mass: MIT Press, 1969

O'Connor, N. "Educating the Ineducable," *New Society*, October 8, 1964

Horton, K. B., Davies, C. O., & Woodcock, R. W. *Language in Space and Time*. Circle Pines, Minn: American Guidance Service. in preparation

Woodcock, R. W. "Rebuses as a Medium in Beginning Instruction," *IMRID Papers and Reports*, vol. 5, no. 4, 1968.

Woodcock, R. W. Clark, C. R., & Davies, C. O. *The Peabody Rebus Reading Program*. Circle Pines, Minn: American Guidance Service, 1969.

Cognitive Training with the Educable Retarded: The Action

John William Hagen

University of Michigan

During the past decade psychologists from several different persuasions have become involved in developing approaches and programs for the child with learning difficulties. Previous to this time the majority of psychologists focused on personality aspects, and child clinicians utilized some form of psychoanalytic theory as their basis. Now, however, the psychologist has entered the domain of the educator and the special educator. Unfortunately he is often seen as an intruder and sometimes, perhaps, rightly so. But he should have some things to contribute, and today I shall explore what some of these might be. Then a project in which we have been involved the past one and a half years will be discussed.

In a recent interview, the famous developmental psychologist Jean Piaget expressed concern at the psychologist's eager entry into application. He said, "Too often psychologists make practical applications before they know what they are applying" (Hall, 1970, p. 32). However, the psychologist is as often criticized for remaining in his ivory tower. Some position between these extremes is being advocated at this symposium today. I believe psychology has made sufficient gains so that applications to the learning processes of children can be responsibly carried out.

All of education is concerned with the cognitive development of the child. Psychologists have studied the development of cognition, or thought processes, extensively. Applications to education can be seen at many levels. Infant and preschool programs now exist which are based on the cognitive theory of Piaget. Curricula are being developed from his observations and tasks. Perceptual training programs for the perceptually handicapped child are in use. The "New Math" was developed to teach the child an understanding of the theory underlying mathematical operations. Language has been identified as a particularly important area and many theorists hold that there is an intimate relation between language and cognitive development. Thus language training programs are in use which focus not only on language skills but also on concomitant cognitive skills.

However, cognitive development cannot be viewed in isolation. It now seems obvious that the total milieu in which the child operates must be taken into consideration. Some argue that even when changes in cognitive and learning skills are the ultimate goals, these changes may not be generalizeable and long lasting if motivational and social factors are not specifically considered in the total programing. Oftentimes what seems to be a competency deficit in a child is closely intertwined with a lack of self-confidence or a lack of significant motivation to perform. Also, in the case of the culturally deprived child the deficit may be in the eyes of the beholder (that is, the psychologist or educator), as pointed out by Stephen and Joan Baratz in a recent Harvard Educational Review (1970).

While some view the cognitive approach as being theoretically opposed to the behaviorist model, I have found that the latter provides a good operational framework in which the former can be systematically studied. Dr. Percy Bates and I have been involved in a project for the past year and a half which involves both undergraduate and graduate students in psychology and in education who work with children with learning and school difficulties. Our goals are twofold: first, to provide a solid training program for our students; and second, to provide a tutorial program for the children which is both enjoyable and beneficial. The students have been exposed to cognitive and social development models relevant to the types of children with whom they deal. At the same time, the model of behavior modification has been presented to provide a methodology within which to operate. The weekly seminar sessions stress the importance of establishing particular goals and specific ways of obtaining them. We provide suggestions and help but do not force a particular procedure on the student.

Before we examine some examples of how our students have actually developed specific programs for their children, it is useful to review the principles from the behavioral approach which have helped structure our framework.

The behaviorist school has demonstrated that these can be applied to bring about certain modifications in the behaviors of organisms. Behavior modification is the short-hand descriptive phrase often used. The main principles are the following. First, reinforcement. Reinforcements can be either positive, sometimes called reward, or negative. Often those reinforcers already available in the environment are utilized; other times new reinforcers are introduced. Research has demonstrated that certain characteristics, such as age, determine which reinforcers work best. Young children often like edibles. Older children work better for praise, or money! A little exploration can usually establish what will be effective for a given child in a given situation. Second, contingency is perhaps the key principle in behavior modification. The reinforcer must be timed to come immediately after the behavior to be learned occurs. Often the same reinforcer can be used as has been available in the past, but the contingency must be correct. For example, one teacher I know punished a boy by requiring him to stay after school each day. It was pointed out to her that the child liked to stay with her and clean the blackboard and talk. He then was required to earn the privilege of remaining after school, and his in-class behaviors improved rapidly. Third, the behavior to be changed often needs to be broken into small, sequential steps. The particular situation must be analyzed and subgoals established. The initial goal for a nonreader should not be reading, but rather, perhaps, letter discrimination. The fourth and last principle we shall cover today is: feedback. The first guess, or hypothesis, is often based on limited information. The behavioral records indicate if the behavior is changing. If the desired behavior change does not occur, the model says that it is the programer's or teacher's fault, not the child's. Charts and graphs of progress are kept not only for the child but for the programer as well.

The behaviorist position also questions the validity of the usual classificatory schemata. The lack of consensus among diagnosticians is pointed to as evidence for their argument. Labeling the child as educable, trainable, or learning disabled does not really help the child or those who have to plan programs for him. Rather, diagnosis and "therapy" constitutes one and the same process and is ever-changing. My own experience in working with learning handicapped children makes me sympathetic with this point of view.

Now a description of our project should be helpful. I shall present an illustration of the work of one student with his assigned child. Then one of our students who is with us today will tell you about the program he carried out with two of the children. Since the children were initially referred to us by their parents, through the Ann Arbor Association for Children with Social and Learning Difficulties, the student's first contact was with the parents. They provided background information on the child and also specified particular areas in which they thought their child needed help. The student then reported back to our seminar, and the faculty and other students collaborated to help develop the initial steps of a program. It was found that the kinds of problems did, indeed, fall into one of two categories: social and cognitive-learning. Often a particular child exhibited both kinds. Close contact was maintained with the parents at all times. The participating students were provided with progress sheets on which they were to specify the following: the particular problem being attacked, the method to attack the problem, the success or failure of the method, and modifications or changes in problem definition resulting.

Our student, David Schultz, has worked with Jim (not his real name), then 11 years old, since January, 1969. At the time Jim was in a Michigan Special Education class for the educable retarded. His teacher described him as having a short attention span, being easily led, craving attention, and not to be trusted. Further, she said he behaved, "like a little animal running around in a blind stagger". The principal concurred. David found him to be quite different, however. He was polite, cooperative and friendly in the early meetings. It was decided to start with a program to develop cooperative behaviors. Behavior modification principles were decided upon as the method. Crafts, model building, and indoor and outdoor games were used as activities between the two. Excellent rapport was established. An academic assessment revealed that Jim had many deficits. Reading was almost nonexistent, the letters of the alphabet could not be recited beyond F, and the ability to tell time was minimal. Sessions were then in large part devoted to programing in these skills, and initially cracker jacks and M & M candies were used as reinforcements in addition to verbal praise on a continuous reinforcement schedule. Later ratio schedules were used, and the material rewards were not needed. In addition, a "Good Behavior Chart" was set up and Jim's mother helped him keep a daily record. Items such as brushing teeth, taking medication, and completing homework were included. Thus regular feedback was provided to Jim and his mother. Jim showed steady progress on all levels, except in school. By August, he knew his letters, read over 25 words, and could tell time fairly well. David left in September to study in Europe for four months. Last Fall Jim was put on half days in school and was frequently expelled. Then the school officials filed a case to get Jim committed to an institution. An occupational therapist who worked with the parents' association was assigned to Jim's case. He also saw a physician and a new medication was prescribed, which was supposed to increase his attention span. A program designed to train eye-hand coordination and visual tracking was implemented. When David returned last January, he found that Jim had improved in numbers and arithmetic skills especially. However, he was no longer attending school at all. David devised a new program in multiplication, and also a perceptual-motor task which involved placing various geometric shapes. Correctness and latency of responses were recorded and performance records were kept which provided feedback to both tutor and tutee. A report card was prepared by David and weekly grades were given in attitude, arithmetic, reading, and telling time. A token-economy system was set up to improve Jim's self-control. During the sessions, points were earned for asking relevant questions, the lack of occurrence of extraneous noises and movements, and speaking clearly at a normal level. When enough points were earned, they could be spent on activities such as attending a sporting event. Thus the contingency was explicitly established. The results showed that Jim was able to make progress in all these areas. Recently the family moved into a new house in a different school district. The court case was dropped, and currently Jim is attending school in a regular classroom. The reports are that he is getting along very well. It is difficult to say just how much of a role our student David played in Jim's success story, but we are quite sure it was an important role. We also cannot say just exactly what role the specific programing played, but it did provide a mode in which to operate and the cumulative records indicate definite, quantitative evidence of progress.

The final papers which the students wrote for the seminar point out to me that we have achieved our two initial goals. First, the students demonstrated that they were able to integrate theoretical constructs with their experiences with the children. David Schultz used his work with Jim to illustrate and verify aspects of the social learning theory of Bandura and Walters (1963). Reading David's paper makes the theory really come alive! That social and cognitive factors can be profitably integrated and used to facilitate each other was illustrated not only by David's paper but by several others as well. The second goal, that of a valuable experience for the children, seems to have been achieved according to several criteria: the students' papers, the behavioral records kept by the students and in some cases the parents, the parents' evaluations which were systematically collected, and finally, the children's unanimous and outspoken enthusiasm for the project.

References

Bandura, A. and Walters, R. Social Learning and Personality Development. New York: Holt, Rinehart, and Winston, 1963.

Baratz, S. and Baratz, J. Early childhood intervention: the social science base of racism. Harvard Educational Review. 1970, 40, 29-50.

Hall, Elizabeth. A conversation with Jean Piaget. Psychology Today, 1970, 25-32.

DEVELOPING SOCIAL LIVING SKILLS WITH THE EDUCABLE MENTALLY RETARDED IN SECONDARY SCHOOLS

Octavia B. Knight, Ph.D.
North Carolina Central University

The extension of special education classes for the educable mentally retarded into the secondary school is indicative of the progress that is being made toward providing a comprehensive educational program for these students. Despite the increasing doubt with regard to the efficacy of special classes, there is still a trend toward the establishment of these classes. While the progress is slow in some school divisions, there is evidence of continued expansion of the secondary programs.

Included among the curricular concerns for this group is the development of more effective social living skills, which is the primary concern in this presentation.

This area is gaining widespread attention because of the large number of retarded adolescents who need help in the development of a set of socially acceptable behavior patterns.

The term social living is viewed by many as being synonymous with social adjustment. A more concise view, however, may be stated in terms of avoidance of conflict with the law, lack of dependency as adults, emotional stability and adaptability.

In defining the term, Heber (1962) stated that during the preschool and school-age years, social adjustment is reflected, in large measures,

---

Dr. Knight is Associate Professor and Director of SpecialEducation, North Carolina Central University, Durham, North Carolina 27707 in the way in which the retarded child related to parents, other adults, and age peers. At the adult level, adjustment is assessed by the individual's independence, gainful employment, conformity to personal and social responsibilities, and standards set by the community.

For the purposes of this presentation, the terms social living and social adjustment will be used interchangeably.

With the proper guidance, the social adjustment of the educable mentally retarded individual can be as successful as any normal person. This fact is evidenced by the large numbers of mentally retarded who lead happy lives, have friends, are economically independent, contribute to community welfare and generally function in our society as good citizens. Although this situation is not too prevalent, it is still more probable in a democratic society that acknowledges the dignity and worth of the individual. Though many of our human values are continually verbalized, they are often found inadequate in the human relationships of every day living. Despite this inadequacy, ours is a society that is focusing on problems and seeking ways to offer hope to those who are retarded.

The importance of the culture into which the mentally retarded are born can easily be discovered in a cursory examination of history. In the past, social adjustment in many cultures was not only improbable but quite impossible.

Mental retardation elicits widely differing emotional responses and cultural attitudes in different societies. Also, within a particular society, individually and as a group, the members of that society may have widely differing social and emotional reactions to mental retardation. These attitudes toward mental subnormality have been under the influence of an evolution in cultural concepts.

In regards to this evolution Lawrence (1954) gives four stages of development. The first era is called the restrictive period when the mentally retarded were herded into institutions and colonies for their own protection and protection from the scrutiny of curious individuals in society. The second era is called one of social control. While advocating humanistic treatment on one hand, they preached sterilization on the other. The third era focused on social adjustment with the belief that the retarded were capable of making their own way in the community. In the present, fourth stage, we are concerned with the emotional adjustment of the retarded, recognizing that the basis for good social adjustment is emotional stability.

Smith (1964) in discussing the social-emotional components of mental retardation focused on the concept of "self" as the central idea which guides the retardates in their relationships with others in the social environment. He postulates that because retarded children are denied the kinds of social experiences in which stable and acceptable self-images are formed, they are unable to learn the role skills and form relationships necessary for adequate social living.

Fraenkel (1961) has suggested that because of the negative connotations associated with stereotypes, beliefs and concepts about the capabilities of the mentally retarded we have superimposed a social retardation upon their mental retardation.

It should be noted that social maturation, like mental maturation occurs in stages, each of which is a necessary condition for proper development of the next. These stages are linked directly with the numerous cultural forces which impinge on a retarded child in society. The extent to which these forces affect his social adjustment may be reflected in three areas; the home, the school and the community.

The Home

The mentally retarded child's problems in adjusting to social living are usually a reflection of the type of family into which he is born and the type of neighborhood in which he lives.

If the child is born into a family of low socio-economic status it is possible that he will have different types of adjustment problems than the child born into a "middle" class family with higher economic status.

The mentally retarded child of parents who themselves are submarginally adjusted to society, often are unable to acquire knowledge of right and wrong conduct and their value structure is inappropriate for the acquisition of adequate social skills. Lack of control and absence of discipline during the formative years impede the retarded child's progress toward a socially well-adjusted life. The absence of firm guidelines leads to confusion and misunderstood ideas of the acceptable standards of society.

The mentally retarded child born in the middle class family faces a different type of problem than those born in the lower class. The middle class family is generally more socially motivated and more concerned with raising their social status. Hence, these chilren will have firmer parental control and a more well-defined value strucure.

The School

The school is the prime institution, along with the faily in socialising the child. As such, the total school experience with its potential for influencing the adjustment of the individual can be an asset or a debit.

As the retarded child progresses through childhood his problems become increasingly acute. His conflicts continually grow more severe, and his psychological defenses need constant maintaining. With increasing years the gap widens between himself and normal children of the same chronological age, resulting in frequent behavioral disturbances.

Many of the childhood experiences that other children casually accept are denied him. He seldom experiences the close childhood friendships, group activities and shared experiences as do normal children.

The school is an agency of culture which can aid in shaping the desirable patterns of social behavior. The special class teacher is the key person to assist the retarded child in adjusting to the societal demands.

As the mentally retarded child approached school age the impact of the social and cultural forces outside the home begin to assume importance. The difference between his capacities and those of the more normal child becomes more discernable, and the inevitable unfavorable comparison between his abilities and those of other children is constantly present.

Many items of social knowledge are inadvertently acquired by the average child as a matter of course. However, for the retarded to become adept in these various social areas specific practice and training are necessary.

Training in social skills should begin at an early age. If the program is instituted at an early age the training can be one of prevention rather than correction. According to Havighurst (1962) social values and skills have been fairly well crystallized by age ten.

The importance of early social training is also emphasized by Kirk (1958). In a study of preschool retardates he compared the differences between an experimental group of retardates who were given special training and a control group who did not receive preschool training. The findings indicated that the experimental group was more socially adjusted than the control group when tested later in school. The rate of social growth for the experimental group was found to be in proportion to the degree of parent cooperation.

The Community

Acceptance in the community is a contributing factor in social adjustment for the retarded. The degree of acceptance appears to be directly related to economic adequacy. If one is capable of earning a living, providing for his family, participates in church and civic affairs and avoids conflict with the law he is accepted as a good citizen.

As stated earlier, demonstrating independence is one of the important criteria for defining social adjustment. Several follow-up studies of the mentally retarded have revealed some pertinent information. The earliest of these studies were conducted by Fairbanks in 1933 and Baller in 1936. These studies indicated that many of the retarded, though below par for normals in all around social-economic adjustment, were still able to provide for themselves and get along well with others. Although these studies may have contained methodological problems, they do represent pioneer efforts in research with mentally retarded subjects.

A review of research relating to social and occupational adjustment (Goldstein 1964) further indicated that adult retardation were generally inferior in most criteria including employment. For this reason, training in social and occupational skills is necessary to increase the possibility that more educable mentally retarded persons can become self supporting.

Conclusion

The needs of the retarded correspond to the needs of the normal child except that the retarded must cope eventually with an adult world with inferior mental equipment.

One of the basic needs of the retarded is to feel secure within his own family group. In the home he must feel loved by all members of his family. He needs help in understanding and accepting his limitations.

In school he needs recognition, encouragement and praise when he performs a task well. Emotional security is fostered through recognition and consideration. He needs to feel adequate in everyday life situations and to be accepted for what he is and not for what others would like for him to be.

In the community he needs to gain new experiences and to develop socially to the extent that he is accepted by his family, friends and associates.

The retarded child's program should include training in all areas of social living. Particularly since many of the retarded students who are presently enrolled in secondary special classes may have developed habits and attitudes which have made them socially unacceptable. Since this group will be faced with the problem of getting and holding a job, attention given to the development of social skills will increase the employment possibilities for these students.

Appropriate work study experiences under competent supervision is essential for retarded adolescents if they are to make a sucessful transition from the special classes into the labor market. Those who work with retarded youth must utilize every resource to evolve creative and sound methods to offset the dilemma with which they will be confronted if they are inadequately prepared.

It is a well-known fact that more persons lose their jobs because of personality and social problems than because of incompetence. Thus, fostering social development and emphasizing acceptable behavior should be an important area of the curriculum for retarded adolescents. The development of social living skills is viewed as being a contributing factor in the retarded youth's ability to discipline himself for training to improve skills, to respect authority, and relate effectively to his fellow workers. Stressing social skills in secondary school classes is particularly important since the acceptance of the retarded adult in the community will depend on his social adjustment as well as his competence on the job.

In conclusion, two basic purposes emerge with regard to increased emphasis on the development of social living skills for secondary level retardates. These are: 1) to alleviate the socialization deficits and, 2) to increase interpersonal relations necessary for job success.

POSITIVE APPROACHES TO THE DEVELOPMENT OF SOCIAL LIVING SKILLS

Primary Objective: To aid students in achieving personal, social and occupational adequacy.

Curricular Areas:

1) Social Etiquette
    - Courtesy
    - Good manners
2) Presentability
    - Good grooming
    - Personal hygiene
    - Appropriate dress
3) Personal Characteristics
    - Sociability - Interact with classmates and associates
    - Appearance - cleanliness, neat in appearance
    - Adjustability - react to situations in a mature manner
    - Flexibility - able to accept change without intense emotional reaction

SOME TECHNIQUES FOR DEVELOPING SOCIAL LIVING SKILLS

1) Role playing - active participation by students
2) Movies and Film strips - showing models of appropriate behavior
3) Games - content geared to interests of secondary students
4) Real life experiences - dances, parties, teas and other social activities
5) Observation - observing models
6) Discussion groups - topics suggested by students

7) Lectures - topics of interest to secondary level retarded students

8) Reading - appropriate references within the level of comprehension of secondary students

GOALS FOR THE SECONDARY HIGH SCHOOL RETARDED STUDENT

1) To gain confidence in his ability to conform to patterns of social behavior

2) To gain competence in achieving responsibility for self control

3) To gain assistance in setting up standards of acceptable behavior

4) To achieve ways of meeting social needs

5) To gain greater mastery of social situations

6) To achieve improved relationships with classmates and associates

7) To enhance self concept and achieve skills necessary for self direction

GOALS FOR THE SPECIAL CLASS TEACHER

1) To more effectively utilize motivational techniques

2) To recognize the critical role of the special teacher in helping retarded students develop social skills

3) To reflect a confidence in professional competence

4) To focus attention on commendable behavior

5) To provide greater opportunity for retarded students to enhance self concept and achieve self direction

SUGGESTIONS FOR TEACHERS

1. Have each student make a list of things he does well. The teacher may use this list to assess the opinions that individual students have of themselves.

2. Also, have students make a list of things they cannot do well and on which would like some help.
3. Ask the class to assist in compiling a list of desirable social skills.
4. Ask the class to assist in compiling a list of undesirable social skills.
5. Discuss the students lists and help them see differences in acceptable and unacceptable social behavior.
6. Use role playing technique of having students act out situations to emphasize development of social skills.
7. Have students act out a number of types of situations. For example, a skit demonstrating the right and wrong way to behave at a party, on a job, visiting friends, etc.
8. Encourage class discussion on what is involved in these demonstration scenes.
9. Have appropriate demonstration materials available for each activity.
10. At the secondary level the students need to participate in reality situations. Thus, after a resonable period of social training, plan an activity and observe how well the students have internalized the concepts regarding the acquisition of social skills.

SUGGESTIONS FOR ADMINISTRATORS AND SUPERVISORS

1. Give teachers ample support in planning and executing activities designed for developing social skills.
2. Recognize more fully the special class teachers role.
3. Allow special class children to participate in social activities and other school activities where feasible.
4. Solicit parent cooperation in planning a program of social training for retarded children.

BIBLIOGRAPHY

Baller, W. R. "A Study of the Present Social Status of a Group of Adults Who, When They Were in Elementary Schools, Were Classified as Mentally Deficient," *Genetic Psychology Monograph*, 18 (1936), 165-244.

Beery, Mary. *Manners Made Easy*. New York: McGraw-Hill Book Company. A good resource for teachers and pupils in the secondary special classes. Includes such topics as social poise, manners at home, behavior at school, cleanliness, grooming, clothes, table manners, dates and dances.

California State Department of Education, Mentally Retarded Students in *California Secondary Schools*. Sacramento: California, 1953.

Capobianco, R. J., and Dorothy A. Cole. "Social Behavior of Mentally Retarded Children," *American Association of Mental Deficiency*. 64 (May, 1960),638-651.

Dexter, Lewis A. "A Social Theory of Mental Deficiency," *American Journal of Mental Deficiency*, LXII, No. 6 (May, 1958), 920-927.

Edgerton, Robert B., and George Sabagh. "From Mortification to Aggrandisement: Changing Self Concepts in the Career of the Mentally Retarded," *Psychiatry*, XXV, No. 3 (August, 1962), 263-272.

Fairbanks, R. F. "The Subnormal Child-Seventeen Years Later," *Mental Hygiene*. 17 (1933), 177-208.

Goldstein, Herbert. "Social and Occupational Adjustment," *In Mental Retardation* A Review of Research. Chicago: University of Chicago Press, 1964, 214-258.

Guides to Special Education in North Dakota, *Department of Public Instruction*. Bismarck: North Dakota, 1961.

Guide for Curriculum Development. *Educable Mentally Retarded*. Raleigh: North Carolina Public Schools, Department of Public Instruction, April, 1967, 39-44.

Hanson, Paul J. *Strengthening Family Life Education in Our Schools*. American Social Hygiene Association, 1970 Broadway, New York, $1.00.

Teachers of educable mentally retarded students will find it useful in developing units at the secondary level on developing social skills, planning for the future and family living.

Harris, Dale B. "Work and the Adolescent Transition to Maturity," *Teachers College Record* Teachers College: Columbia University, November, 1964.

Heber, Rick. "Definition of Mental Retardation," In Mental Retardation. Jerome Rothstein (ed.) New York: Holt, Rinehart and Winston, 1962,10.

Kirk, Samuel A. "Early Education of the Mentally Retarded," Champaign, Illinois: University Press, 1958.

Lawrence, Ernest S. "Social Adjustment: An Area for Psychological Research in Mental Deficiency," American Journal of Mental Deficiency. 58 (May, 1954), 500-505.

Mayer, Jane. Getting Along in the Family. Bureau of Publications, Teachers College, Columbia University, New York, N.Y. 60¢

Murphy, Thomas J. "Assessment of Students Through Work Experiences," In Work Education for Educable Retarded Youth. Francis E. Lord, Editor. Los Angeles: California State College, 1964, 24-25.

Neuber, Margaret A. Social Skills for Living and Learning. State College: Pennsylvania State University, 1959.

Excellent for use with Junior High and Senior High School children. A sequential arrangement of learning tasks designed to meet the needs of educable mentally handicapped children.

Rothstein, Jerome. "The Secondary Curriculum and Work Education," In Work Education for Educable Retarded Youth. Francis E. Lord, Editor. Los Angeles: California State College, 1964, 47.

Science Research Associations - Pamphlets or booklets. About You, Family Living Series, Vol. 1. Growing Up Socially, 1949; Guide to Good Manners, 1952. 57 Grand Avenue, Chicago, Illinois.

The Getting Along Series, P.O.Box 460, Montclair, New Jersey: Economic Press, Inc.

Smith, Harvey L. "Sociology and the Field of Mental Retardation," Unpublished Manuscript, Chapel Hill: University of North Carolina, February, 1964. 14.

Wheeler, Hubert. The Education of Adolescents Who Are of Retarded Mental Development. (A Guide for Teachers). State Department of Education, Jefferson City, Missouri, Copyright 1956.

EXPLORING THE NATURAL ENVIRONMENT
THE SCHOOL CAMP EXPERIENCE

Carol Halliday
Coordinator, Day Care Comprehensive Care Center
Lexington, Kentucky

Those of us who work - in one capacity or another - with visually impaired children are increasingly aware that many of the experiences, many of the learnings, which sighted children are involved in almost effortlessly are missed or attained only in part when vision is limited or lacking. Of the several vital life areas - including the personal, the social, the natural - the latter is perhaps most easily subject to neglect, though the importance of each and their dynamic interrelationships cannot be denied. When an experience can be had, therefore, which provides the visually impaired child with an in-depth involvement in personal, social and natural life-areas so that knowledge of and development in each occurs with the major result a better, fuller-functioning person we are obliged to consider it as an integral part of the school curriculum. Particularly when we listen to what is common-talk these days regarding relevancy of school programs (and the commonness of talk is no sign of its inappropriateness) do we need to weigh curriculum content. Those who have participated in meaningful school camp experiences acclaim their benefits and values.

If the only worth of such an experience were acquainting a child with the out-of-doors and giving him beginning glimpses of its many feels, smells, tastes, sounds, sights, kinesthetic aspects - with the spiritual ramifications thereof - this would indeed be sufficient purpose. There is much more, however, to school camping, conceived and carried out as a quality program. The essential facets which create "quality" as differentiated from simply "fun" or "entertainment" in an outdoor setting are: a small-peer-group living situation; teacher-other adults-children planning for, then carrying out the days' events together; academic content given intensified meaning, through incorporation in highly purposeful ways; emphasis on the importance of qualities other than the scholarly - with grades set aside as the reflection of competency; kinds of motivation which may reach children relatively untouched in the usual classroom setting. Whether a child be in a residential or day school, whether he be in a visually-segregated situation or in an integrated class, whether he be totally blind or have a fair amount of usable vision, whether he have other handicaps or have only one, a well-planned and actuated school camp experience will have very real pertinence for him.

Surely we need at this point to be of one accord regarding a definition of the school camping experience. The American Camping Association, long the national leader in all the kinds of camping, states it thus: "the term school camp means that the classroom has moved outdoors with the teacher for a period during the school week to further the learnings of the classroom and aid in the concepts of the natural environment, doing those things in the democratic atmosphere that can best be done in the outdoors." (American Camping Association. Interpretative material, "School Camping and Outdoor Education Definitions." - Bradford Woods, Martinsville, Indiana.) Let us notice that the emphases are on democratic living and doing together of children and adults and the happy curriculum blend of the academic with the "natural" (that which is available in the school camp outdoor setting).

The ingredients of a successful (and let us think of success in terms of all the foregoing) school camp program are several, but not so overwhelming that they can't be found in almost any part of our country. Let us consider them before looking at a specific experience and the ways in which these ingredients were there realized, then culminated in a dynamic, enriching program. Interest of the school administration is a must - it may originate with the administrative staff or it may initiate from one teacher, or from parents. If an administration is sure enough of itself, however, to be open to ideans new to it (though far from new to many), and to support its faculty and/or parents in their desires to give well-founded programs a try, then that administration will indeed be sold by the participants "after the fact." How the idea begins is not of particular relevance - that it be planted, and take root, is of prime importance. A second ingredient - almost without saying - is the composite one of children, teachers, other staff. A third is that of parent interest and understanding as well as involvement. A fourth is an appropriate camp site, with a core staff whose familiarity with it assures the campers its proper use. (Be aware that a primitive site is not intended, since the purpose of the typical school camp experience is not that of developing experts in camp craft nor of teaching children and adults, usually novices at outdoor living, how to survive in the outdoor setting. Primitive camping is a high step on the camping ladder - one of much value but suited to a relatively eclectic group.) A fifth ingredient concerns the program during the school camp experience. As stated before, it will be a meaningful integration of the school curriculum of the participating class and of the learnings inherently available from the outdoor setting. The sixth ingredient involves the equipment and materials necessary, both the personal and group - both for living and general program purposes. A seventh is that of staff training which brings together all those adults who will be working with the children for an effective school camp experience. The eighth ingredient is a collection of odds and ends - important, though so-named - including: transportation, medical concerns, insurance, food, parent permissions, educational publicity, camper fees and general cost, evaluations and appropriate thank you's after the school camp ends.

In order to translate the general into the more usable specifics, may we turn our attention now to an actual school camp experience shared in by a 5th grade class with which I had the good fortune to be involved. An interested, though slightly wary, administrative staff saw sufficiently the values of this kind of program to override concerns regarding cost, changing the usual curriculum-routine, the stirring of houseparents as well as teachers into actions beyond the call of duties, etc. (Let it be noted that once the green light has been given to one class and arrangements made in all the necessary areas, it is just as easy and appropriate for more than one class to be involved - given the interested teachers or the opportunity to create such interest.) In most parts of the country there are persons knowledgeable regarding school camping, either within school systems or local camping associations. The bringing together of such a person, as consultant, with the teacher and class who wish this kind of experience, is an early step in the planning. This was done in the case of our fifth grade class. Related initial efforts set a proper tone for all involved, gave guidance and direction and enabled the selection of a camping area suited to the purposes of the class and teacher.

A visit to the particular camping spot was made early by the teachers involved; program evolves from site arrangements and possibilities and the site must be chosed for its amenability to the purposes of the camping experience. A site which allowed small peer-group living, four children to a cabin--two cabins to a "village", with the staff cabin close at hand, was the one utilized by the 5th grade group whereof we speak. The class of 15 children occupied two adjacent villages. Each village had a toilet and wash-trough area, and access to a shower house within easy walking distance. A central dining hall and kitchen adjoining a comfortable indoor program-room especially for rainy day activities (with central heating possible should May weather have played drastic tricks) rounded out the man-made physical facilities of this site. All was nestled in a lovely wooded, though not wild, area of 125 acres - with a small lake available for wild life enjoyment, fishing and boating, an open meadow area and much hiking terrain. Early contact with the director of the camp (owned by the state Easter Seal organization) assured us of a core camp staff (including a nurse) to be on hand through the school camp week, cooks and meal service (with food and menus to be provided by our school), basic living and program materials, insurance (through the regular camp policy) and publicity in the participating children's hometown newspapers. Plans were made regarding precamp training for the adults participating, slides were shown of program possibilities to class and teacher - the few camp rules were explained, and specific suggestions were made regarding program planning.

Initial contact with parents - beyond casual verbal mention - was made early by the administrative staff in consultation with the teacher. It was explained that the school camp experience was an integral part of the year's curriculum - its values were enumerated - its ramifications in terms of parental involvement and actions specified - and it was stated that all children would be expected to participate (except for very special reason). Parents were requested to sign a permission form allowing their children to share in this off-campus activity. This form conveyed details of time and place, etc., and stated who the contact person would be, on school campus, should an emergency arise to warrant communication from home to a given child.

The program of the school camp experience was developed by teacher and consultant, with the children; it was planned to fill a week running from arrival at camp on mid-Sunday afternoon to leaving for home on the following Friday, after lunch. From the beginning it was realized that a prime purpose of the school camp experience was to give children a chance to be vitally concerned with the planning of their program - this being an area in which children carry little, if any, responsibility in the usual school curriculum. In camping circles, programming that evolves from the group concerned, rather than that which is structured hour by hour in terms of scheduled activities, is called "decentralized." Proponents of decentralized camping are ardent in its praise since it helps children learn to plan, to consider, to weigh, to anticipate exigencies, to decide, to work with others - peers as well as adults. In the case of our 5th grade class, goals were set which fit within the frameworks of the applicable curriculum content and the program possibilities of the camp setting. A large program chart was drawn, on which the few daily scheduled activities (such as meal time, and group-decided rising and bed time) were noted. Then blocks of hours - morning, afternoon, evening - were designated, and initial plans were detailed to carry the group through Sunday arrival, settling in, exploration of the immediate camp area, nosebag supper, evening pow-wow (a session around a small campfire, including shared thoughts, recap of the day, planning for the morrow, songs, etc.), an explanation of night-noises prevailing in the camp area, going to bed, beginning the next day. The program chart was detailed each morning for the entire day, based on the refined plans of the night before. Overall goals for the entire week were noted and a few related activities (such as a hayride and a cookout) were placed on the chart at this early point. (In cases where more than one class camp at the same time a camp council, composed of two members from each village and meeting with one adult, has proven highly effective. This council is responsible for inter-group communication and planning, and generally prepares one or two "all-camp" programs during the school camp week.)

Another matter of group concern is that of equipment and supplies of all kinds. Consideration was given to: personal equipment needed by each individual, and group equipment (such as braille writers for letter-writing and rope-marked at 12 inch intervals for measuring purposes). Demonstration was made regarding how each person should pack his own belongings in a neat, compressed, identifiable manner. Group materials were gathered, listed and packed by teacher and children. A "kaper chart" was made so that certain basic jobs necessary to group functioning and well-being could be shared. These included: table-setting and serving, general village and all-camp cleanup, fire building (regarding the pow-wows), others. The camp living arrangements were described and discussed and the children were placed in cabin groups of four by the teacher. The responsibilities of a cabin-member were talked about and points were made regarding cabin-care, location of belongings and of basic cabin equipment (beds, orange crates for toilet articles, location of suitcases under beds, location of wet washcloths and towels, etc.).

Essential to the success of the school camp program is the involvement of sufficient staff to enable individualized experiences based on the personal needs of the children. In the case of the group about which we're speaking, the necessary additional staff came through two sources, the Easter Seal organization (its core camp staff) and a not-too-distant college distinguished for its Special Education program. The college set up certain prerequisites for participation, then gave hours of credit to its students - based on certain criteria. It provided a faculty member for at-camp supervision, consultation and general aid, and set up procedures whereby these students could be trained, both on the college campus and at camp during the regular pre-camp training. It was possible for the Easter Seal Society to reimburse each student nominally ($25.00) for transportation to camp and related expenses - this was welcomed by all recipients. The staff - teachers, camp personnel and college persons - shared a 24-hour pre-camp training which, though far from really adequate, enabled all to get a bit acquainted, further orient themselves to basic purposes and ways of work, learn to know the camp first hand, hear the program plans of the children and teacher and give consideration, though briefly, to each child coming to camp. Staff assignments were worked out regarding living and program arrangements - special needs of certain children were planned for - and a functional rapport among all was attained.

Just before the actual school camp week began, final arrangements were firmed, by teacher and administrative staff, with: the Easter Seal Society regarding camp; the parents regarding pre- and during camp procedures; the houseparents concerning (where applicable) their involvement; the college students and their faculty coordinator.

If only the children themselves were here to talk about the school camp week! Yet, even if they were, the comments of a relatively objective bystander would have to be heard, too, since those aspects which adults particularly would note - though perhaps felt, and expressed in different words by the children - will possibly best convince other adults of the merits of the program. Let's mention some specific high points first - evening campfires, with just the right amount of formal program planned; hikes through woodlands to look, to feel, to hear, to smell, to experience in total-body-involving ways the objects to be found, the terrain, atmospheric changes; fishing in the entirety of the activity, beginning with the finding of worms to the ultimate holding of a fish (no matter how small) in one's hands; cabin housekeeping; crafts carried out using indigenous materials; helping in the dining hall at mealtimes; writing letters home; the building of a dam; sleeping out, as a first-time experience, on cots in front of the cabindoor; reading or talking during rest hours; planning for, preparing for, then carrying out a simple cookout; singing after meals and telling the group assembled about a personal discovery of the day; listening to records indoors to better know, later, frog and bird voices by the lake; showering under an open sky; measuring (with rope taped at intervals) the circumference of trees - figuring areas - learning the value and feel of one's pace; sitting in a group of peers and adults and planning together as to the next day's details, while discussing together the previous day's good and poor points; using free time in as simple a way, perhaps, as lying on one's back on a spot of ground, with shade and sun playing over one; careful village cleaning up before going home; making personal decisions, based on prior discussions, regarding what to wear, the order of doing daily living tasks, etc...... The list of specifics could go even further.

Let's look now, however, at other facets which pervaded the whole program and lose nothing in importance through being described in general terms. Motivation to do - in every area from mobility and orientation to self care to the social to those calling for initiative and creative thinking - was keenly experienced by all. For some children, the effects were nearly marvelous - for all, the difference in setting, the calling forth of other than formal academic talents, the freedom from the usual constraints of homework and grades, the chance to work with adults in new kinds of relationships brought good results. Emphasis was placed on thinking - in terms of making sound decisions, being responsible for one's actions, being creative or at least logical in problem-solving, planning ahead, etc. New skills were learned and new experiences shared in. The outdoor world became much more real and personal to each one present. The beauties of the out-of-doors - its dangers, too - became a part of each self. Appreciation of the modern conveniences was realized by most, though this particular camp setting offered many.

After the camp experience was ended, evaluations were done in several ways. The children were asked to fill out individual evaluation forms - then, as a group with their teacher, did a taped discussion on the subject. The staff evaluated the experience in terms of program, arrangements, training, etc. Parents of the school's day students - who lived nearby and were with their children immediately after the camp ended - were asked for their comments. A formal report of the overall experience was prepared by the involved school personnel - in consultation with those from the participating college and camp - and was sent to all concerned. Thank you's were written by the children to those who gave special help to program or to any other aspect of the school camp experience.

Several points remain to be made, the first of which has to do with the participating in the program of several sighted youngsters, children of some of the staff members. The benefits accruing to all through their involvement were realized in many ways. It occurred at length to a number of persons that an even more meaningful experience might be had if two classes including students of comparable functioning levels but with one group sighted youngsters and the other visually impaired could school camp simultaneously another year. A second point has to do with the applicability of the school camp experience to children with multiple handicaps.

All those values resulting for youngsters "simply visually impaired" pertain just as surely and, in many cases, even more intensively to children for whom our still-prevailing formal academic atmosphere in the usual school setting is inadequate, even damaging. The third point, major above all others, pleads for the kind of ongoing year-round in-school experience for all children which enables their teachers to combine the methods and goals of the good camp counselor, based on the principles inherent in decentralized camping, with the developmental and academic understandings of the good educator. Until this becomes the rule rather than the exception, the uniqueness of the school camp experience will be in its total real-life involvement of those who participate in it. By its nature, each person is enmeshed in a way of life affecting him (child or adult) socially, physically, emotionally, intellectually, spiritually. In that the whole person is concerned, the school camp program stands tall as a vital educational experience.

Carol Halliday
4/20/70

Coordinator, Day Care
Comprehensive Care Center
201 Mechanic Street
Lexington, Kentucky 40507

What Research Has to Offer the Classroom Teacher of the Multihandicapped Child

Nancy W. Steele, Ph. D.

"What does research have to offer the classroom teacher of the Multihandicapped child?" Most of you have heard this particular question posed but far too few of us have actually received answers which may be vitally important to successful classroom management and direct instructional service to our multi-handicapped children and youth. "What does a researcher know about kids?" How can a statistic be related to a child?" "I want to know what to do for Eloise who is CP, MR, and can't "see good" either!" These are more likely the questions and statements one will hear when the word RESEARCH is introduced, ever so gently, into course content or professional presentations.

The word Research is likely to bring about emotional reactions. Unfortunately, most of us have not had the opportunity to work through our anxieties about Research, particularly statistics, so that all pieces, of what seems an extraordinary complex set of procedures and mathematical calculations, fit together into a logical and utilitarian way of presenting information. This experience is often reserved for those who are being trained as researchers. However, the cycle of investigation, dissemination and utilization of results is actually an integral part of current classroom procedure.

We are not in the business of occupying Eloise's school day with activities which may or may not yield results. But each of you here today and those at home manning the shop are vitally concerned with planning and efficiently executing instructional programs which are relevant to the child's needs in a complex social order and which will GET RESULTS! Research can move us toward these goals. By synthesizing findings from research studies and programs, deriving methods for applying these results, then evaluating their effectiveness, we systematically add to our body of knowledge so we can GET RESULTS! This then is what Research is: synthesizing information, deriving principles, devising methodology, application and evaluation. These activities are also the foundation of sound educational practice. Is there a distance between the teacher and the researcher? Perhaps it never has existed except in terms of opportunity to communicate and the language of communication.

If we can agree that the goal of the Practicioner and the Researcher are basically the same we can assume there is also mutual responsibility: that of strengthening communication so we can more efficiently reach our goals!

All too often as we give direct service to children, we become so involved in solving the day by day problems which arise, that we fail to step back and take a look at the total picture. If we are able to stop from time to time and evaluate what is happening within the classroom, we will see the same problems coming up. Conversations in teachers lounges or at meeting such as this make us acutely aware of this fact. We are often forced to provide ourselves with answers or make decisions upon assumptions which could be in error, because a course of action must be taken then and there. In a sense, the practicioner is a researcher! Because of the setting in which he does research he must fudge a bit with the "scientific method" and his findings are often limited to an n of 1. But he is posing questions, finding solutions and replicating his findings. The practicioner's methods may be a bit unorthodox, somewhat inefficient and seldom documented, but he is carrying out classroom research. As an integral part of the educational team the researcher can be helpful in implementing these queries.

Perhaps the single most important responsibility of the practicioner is the formulation of questions which need to be answered. What better place for this to occur than in a dynamic setting such as the classroom. Who are better qualified than those on the firing line dealing with learning and management problems as they actually arise? A teacher's duties to her students naturally limit the extent to which she can master the skills of experimental design and methodology. But posing questions? "Why she does this every day". It is the responsibility of the teacher to pose these questions to the researcher who has the knowledge and experience for efficiently finding the answers.

The researcher must frequently interact with practicioners so he will be aware of questions which need to be answered. Talking with the teachers and observing in classrooms is a must. Because of his special training, the researcher can often help teachers to formulate questions in such a way that they can be answered through techniques and procedures available. It is also essential that the results of such inquiries are interpretable and have some direct bearing upon classroom operation--in so far as it is possible.

There is then mutual responsibility of practicioners and researchers to themselves, to each other as they work together and to exceptional children. By assuming this responsibility with deep commitment we can then move from artistic endeavors to substantiated methodology. We will be able to teach children effectively and efficiently to meet the problems they face in learning and growing.

The educational problems of the multi-handicapped visually impaired child are well known to us all. As Berthold Lowenfeld points out the problems which are sui generis to blindness, that is arising out of the impairement itself, are those of conceptualization and mobility. For the child with multiple disabilities, which may include mental retardation, physical anomalies of various kinds and cultural deprivation due to sensory loss and isolation, this statement may not hold true. These are specific identifiable problems which arise from these additional factors as well. When found in combination, the problems of the multi-handicapped and his teachers are multiplied many times over. Through research and practice we have been able to identify learning principles and teaching methodology which apply to specific situations and to children with certain conditions. But will these same principles apply when the conditions are found in combination and are inter-related? Our efforts with multi-handicapped children seem to make this assumption, which may be entirely false. It isn't an encouraging thought, but our modern approach to education is dedicated to displacing erroneous assumptions both in the learner and in the way he is guided in his learning. And so until we are able to refine our knowledge through experimentation, we must draw upon the information which is available to us.

Today I would like to present to you research findings which are applicable to classroom teachers of the multi-handicapped visually impaired individual. The studies are not necessarily hot off the press but because of the lag between study and implementation we shall reinterate. Though research in this particular areas is coming to the fore, we are still infants in our knowledge. But, because we do believe that growth and learning are developmental in nature, we can look forward to the day when we will have many more answers to the problem of multiple disabilities. In our developmental approach to this end, we must draw upon knowledge from many areas in both special and general education. There are many roads to Rome, but those who travel them have the same destination in mind.

One of the most exciting research findings which has applicability to the classroom is reported in a book entilted Pygmalion in the Classroom. Rosenthal and Jacobson studied the effects of teacher expectation with Mexican-American children. Children were randomly selected and labeled as "late Bloomers". Their teachers were told that these children had shown unusual potential for learning on a test given them for this purpose. After a given period of time, it was found that these children did make significant academic gains as measured by tests and in the eyes of their teachers. Rosenthal presents the notion to us that the expectations of teachers may be self-forfilling prophecies of a child's academic success. This study has particular implications for those of us who work with the multi-handicapped visually impaired child.

Our task can seem so great when we are faced with educating a child with a myriad of complex problems. It is so easy to focus upon what the child can't do rather than on what his assets or strengths are. We are so careful not to set our goals too high to avoid failure experiences for children who have experienced so much failure. Our fears may be stifling growth potential that is not so obvious in this kind of child. We do know that it is important to begin at levels at which a child can achieve success in various learning tasks, but once these have been achieved, it is essential that we move on to new accomplishments. Perhaps we should adopt the philosophy of modern behavior theory-there is no such thing as a child who cannot learn-it is just that an appropriate program for learning has not being devised or tried that will reach his learning capability or strategy.

Sequential teaching in steps that may be ever so small can build skills developmentally. If we can identify sequences to learning and build upon each bit of learning--theoretically there is no end to the proccess or the achievements which can be made. We must always keep our expectancies high even for the child who appears so terribly limited.

There are occasions when we have read reports or even made statements ourselves concerning the limitations on potential of certain children. Such thing as "He will never learn to read past the fouth grade level". "This child will be virtually dependent for the rest of his life". "The boy will never be able to hold a job in the community." This may well be accurate estimates of potential, but what would be the result if these predictions were not made? Perhaps a teacher, if she didn't know any better, would help a child reach sixth or even eighth grade reading level. Perhaps a family would not institutionalized their handicapped child. Perhaps a rehabilitation counselor would find a job for an "unhirable" boy! Our approach must be realistic but our expectations must be high. To borrow a sociological term, our expectations must be upward mobile.

The social learning theory (SLT) of Rotter states that we form expectancies for our own behavior as a result of our expectancies. Failure experience caused us to lower our expectancy for performance in one task or another. More positively, success enhances our expectation in subsequent performance. This should be taken into account as we set our expectations for children in the classroom. A program must be implemented that will capitalize upon the successes of the child, as well as allowing for increasingly greater expectations for achievement.

To move now from some aspects of classroom management to more specific techniques, let's consider what has probably been one of the most significant research contributions in the area of the visually handicapped during the past decade. I am sure that all of you are familiar with the work of Dr. Natalie Barraga in visual training for children of extremely low visual acuity. To review her study briefly Dr. Barraga selected twenty children between the ages of 6 and 13, whose IQ's were above eighty and who had not received classroom instruction using visual materials. All of the subjects had visual acuities of not less than object perception nor greater than 6/200 in either eye. Children were matched according to their scores on an author made test of visual discrimination. Half of the Ss received thirty hours of instruction designed to increase the use of functional vision. At the end of the treatment period, those Ss who receive intensive training made significantly greater gains on the Visual Discrimination Test than did those who did not receive training. There was also a tendency for the experimental Ss to increase their near point visual acuity as measured by the Guibor Near Vision Chart. Several of the children also increased their word recognition and reading ability as measured by the Gates Primary Reading Tests. This study was replicated by Ashcroft and Halliday with similar results. The implications of the Barraga study are far reaching, as has been recognized by the US Office of Education. Institutes have been held or are planned to teach teachers in the field some of the techniques used to produce such results in increasing the visual efficiency in low vision children. The value of building a visual orientation in children who must live in a visual world is clear, but also the fact that a national effort is being exerted toward putting into practice the findings of a research study of significant import to our field is an exciting occurrence.

But how does this relate to the multi-handicapped visually impaired child. If we can build a more efficient use of remaining vision in children who because of their multiple disabilities are limited in experiental contact with the world, will this not enhance their opportunity for concept development. Visual orientation will also increase the kinds of materials that can be used in teaching the child. And probably most important of all, a visual orientation in a visual world will allow greater communication between the child and his fellows.

Many multiple handicapped visually impaired children will be able to learn to read and write. With a good sight utilization program, as proposed by Barraga the reading media for some children can be print. For some children who do not see at all or those whose sight is so limited that they must depend upon a tactual analog to print, braille instruction will be an integral part of the school program. Of course, the teacher will have to make the decision of whether to teach braille at all. We have so long considered reading and writing as a necessary part of the curriculum for all children that it is easy to feel likewise with braille. Learning to read braille is a slow and laborious process. This is particularly true for the child who may be of low mental ability. Also, we must consider whether the returns for our efforts and those of the children are sufficient to justify the years needed to achieve mastery. If the end product does not constitute a useful and efficient reading skill, perhaps our time would be better spent using other sense modalities for coveying useful and relevant information necessary to learning and living. As part of my doctoral studies, I was able to begin inquiry into this problem while as a Research Intern at the American Printing House for the Blind. As part of a programmatic research effort in the area of listening for visually handicapped students our study was designed to compare the relative effectiveness and efficiency of reading and listening comprehension in blind children with low ability. Eighty residential school children between the ages of 9 and 20, whose IQ's were below 85 and who used braille as their medium of instruction were used as Ss for study. A test of braille reading speed and comprehension was administered for classification purposes. Ss were classified according to their performance above or below the median reading rate and median comprehension score on an adapted version of the Speed Test of the Gates Reading Survey. This resulted in four groups designated as high comprehenders with either fast or slow reading speeds and low comprehenders with fast or slow reading speed. Half the Ss read literary passages in braille and half read by listening to the same passages. This selections were objectively determined to represent second and sixth grade reading levels. Author made tests of comprehension were administered following the presentation of materials to measure the amount learned in each reading model. Results indicated that the critical variable which affects fifferential learning according to mode is the pre-existing level of braille reading comprehension. Ss with a high level of reading comprehension on the subject classification test learned more when reading. Ss with a low level of braille comprehension learned more when listening. This relationship was not affected by reading speed or difficulty of the material. Reading speed is highly variable among children of low ability and did not seem to affect their comprehension level in this particular task. It had been expected that listening would prove the superior mode for all Ss especially when reading more difficult materials. Ss did consistently learn more when reading easy materials (significant main effect D) however differences in mode of reading were not apparent until level of braille reading comprehension was taken into account.

An analysis of Ss variables indicated that groups formed on the basis of braille reading comprehension in combination with reading rate differed significantly. Ss with a relatively high level of reading comprehension (and to a lesser degree, those who also read rapidly) were both older and had higher measured IQ's.

From these results we may conclude that the child's level of braille reading comprehension determines whether reading in braille or reading by listening will be a more effective learning process. We are not prepared at this time to give a formula for determining just what this level of comprehension may be for individual children, but hopefully further research will help us to make these decisions. As educators we must be sensitive to the accomplishments of our students and realistic in our expectancies for them. No longer will a watered down curriculum or moderately adapted teaching methods be sufficient to reach our goals for the MHVI child. In some cases, we must begin a-fresh, using the information research has to offer. Research can cast doubt on well established practices - it is up to us to make the necessary changes.

If the decision is made to teach Braille skills to the MHVI child, even on a limited basis, it is well that we consider some of the basic research done by Nolan and Kederis at APH. Perceptual Factors in Braille Word Recognition, AFB Research Series #20, contains the report of research which is vitally important to all of us who teach children to read braille. In a series of nine studies the following conclusions were made:

1. The individual braille character is the perceptual unit in braille reading.

2. The process of word recognition appears to be a sequential integrative one in which word recognition is the result of the accumulation of information over a temporal interval.

3. Braille words take longer to recognize when they decrease in familiarity, when they contain contractions, when the dot distribution shifts from the upper to the lower part of the braille cell, and when they are longer.

4. Braille reading appears to be a developmental process. Because the visually handicapped child may be slow to attain skills which are basic to reading readiness such as auditory and tactual discrimination, language development and breadth of experience, the maturational process may be still underway in the upper elementary

grades. Once this maturation has been accomplished, the child is free to increase character recognition skills and develop the perceptual model necessary for reading.

5. Low mental ability appears responsible for slowing character recognition time and for increasing the amounts of time required to sequentialy integrate the information derived from the individual characters in order to arrive at a word percept. Nolan and Kederis infer from these findings that below a certain mental level, which may be higher for that than for print readers, "braille ceases to be an effective medium for educational communication." (This finding was the impetus for the Steele study just reviewed)

6. With intensive training in braille character recognition, braille readers decreased the amount of time necessary to recognize braille characters, improved in accuracy, increased oral reading rates and decreased oral reading errors. There was also a tendency for silent reading rates and comprehension to improve.

These findings make it mandatory that we reevaluate our entire approach to teaching braille reading. For the multi-handicapped: 1) special attention must be paid to the developmental stage at which we begin to teach reading, if in fact this appears to be a realistic goal for a given child. 2) Intensive reading readiness activities must be planned including the development of tactual and auditory discrimination skills, and providing a wide range of experiences within the educational setting. 3) The sequence of presentation of the basic elements of the braille code should be carefully considered to provide a developmental approach which will capitalize on the child's strengths and anticipated weaknesses. 4) Individualized instruction in braille character recognition and other basic elements of the code will increase skill development in all areas of reading.

Though there are more articals written on the multiply handicapped visually impaired child than ever before there are few reports of research being done with this group. Those which are reported are descriptive of various diagnostic, evaluation and treatment programs which have produced gains in adaptive behavior and educational achievement. These gains, which are the result of intensive and varied programming often allow MHVI children to enter existing educational settings or to attain higher levels of functioning. Groups such as those which exist in Michigan, Pennsylvania, Texas, Maryland and Tennessee have documented change in children as a result of innovative programs. More of such research is needed with attention given the particular methods and techniques which make the difference. I am sure that there are many more programs in operation which are accumulating data to support what they are doing with kids. We must refine our techniques, test their validity and pass the information on for the benefit of children and their teachers.

Today I have presented to you research findings which can have direct applicability to the classroom. In discussing the classroom management and motivation strategies, I have not touched upon the use of behavior modification, contingency management or other reinforcement technique. These educational strategies should not be overlooked. There is a great deal of research evidence which demonstrated their applicability and success. We have discussed training for sight utilization, decision making for the educational modality most effective for the visually impaired, and information relevant to the teaching of the braille code and braille reading. May I encourage each of you to make further inquiry into these areas and to put the information into practice, where it is applicable, as you work with children. This process will no doubt raise many questions. Ask them. Find ways of getting nasvers. AND SHARE!

Research Trends: Crippled and Health Impaired

John D. Collier (Chairman)
Director of Special Education
Region III of Madison, Jersey and Macoupin Counties
Wood River, Illinois

Michael T. Chier
Ph.D. Candidate in Bio-engineering
University of Missouri
Columbia, Missouri

Dr. Robert T. Cannell
Assistant Professor of Special Education
Northern Illinois University
DeKalb, Illinois

Dr. Horace N. Reynolds
Research Psychologist
Cybernetic Research Institute, Inc.
Washington, D.C.

Cliff Magnusson
Instructor of Special Education
University of Missouri
Columbia, Missouri

RESEARCH TRENDS: CRIPPLED AND HEALTH IMPAIRED

Over the past several years both students and professors have expended considerable time and energy in bemoaning the apparent lack of research concerning the education of physically handicapped, homebound, and hospitalized children. Occasionally students with an interest in this area of special education were advised to direct their academic programs and graduate research projects toward related areas such as learning disabilities, mental retardation, etc.

Students attempting to develop master or doctoral level research projects were often seriously hampered by problems such as:

1. The limited number of related research abstracts encountered in a diligent search of "respectable library references."
2. An insufficient population for studies in which experimental and control populations are utilized, variables controlled and treatment applied.
3. Limited funding for long-term follow-up studies.
4. Agencies which were hesitant to share client information.
5. Research committees which were weighed against projects which were both desirable and tenable from the researcher's point of view.

Professional contacts over the past several years have revealed that there is actually much valuable research in our field which does not appear in the traditional library references. Perhaps no other area of education cuts across so many other professions as does this division of CEC. Therefore, our educational research should reflect this multi-disciplinary approach. Involvement with projects representing the fields of medicine, engineering, rehabilitation, social sciences, automation (for diagnostic and prescriptive procedures), religion, etc., may all be within our domain of research. It is also proposed that many of our research projects may be more readily funded from sources utilized by these related disciplines than from the traditional funding sources for educational research.

The program for this annual luncheon meeting of DOPHHH is actually an attempt to present four examples of research projects which involve the children who are the professional responsibility of this division of CEC.

Mr. Chier, a Ph.D. Candidate in Bio-engineering, has been involved in a joint project involving the Woodhaven Christian Home, the College of Engineering, and students from the Department of Special Education, University of Missouri-Columbia.

Dr. Robert Cannell's investigation represents the type of project which may be developed in conjunction with a hospital school or a large pediatric unit.

Dr. Horace Reynold's report is indicative of a rather sophisticated project which is developing and field-testing communication equipment for severely handicapped persons.

Mr. Cliff Magnusson's report discusses an investigation of a teacher-counselor program which serves children with a variety of handicaps.

I personally feel that this program represents the types of research which we should capitalize upon. Truly, the future of research in our area of Special Education is most encouraging.

John D. Collier, Chairman
DOPHHH Panel on Research

"MYOCOM" A COMMUNICATION SYSTEM FOR SEVERELY PHYSICALLY HANDICAPPED

By Michael T. Chier, Ph.D. Candidate,
Bio-engineering, University of Missouri - Columbia

A pilot project investigating the benefits of simple signaling devices to be used by non-verbal handicapped individuals has been undertaken by Woodhaven staff and University of Missouri Bio-engineering staff. A signaling device known as "Myocom" has been designed, constructed and tested in a preliminary manner. "Myocom" is a crude prototype for a proposed set of communications systems for use by severely handicapped individuals. Refinement and further development of the system will make it applicable to a broader population of handicapped.

The student uses the "Myocom" by contracting a muscle group. The voltage generated by the contraction is picked up by surface electrodes and electronically converted to a more objective response. For example, a relatively weak contraction could result in lighting a red light, while a strong contraction could result in a green light being turned on. These lights could then be indicative of a "yes" or "no" answer to a question.

The prototype model has already demonstrated a high probability as a useful tool in the education and rehabilitation of one severly handicapped individual. More accurate test scores on intelligence and achievement test measures have been acquired.

An opthalmological evaluation and prescription for glasses were accurately made after hyperopia was discovered through directly communicating by way of the "Myocom". Things had appeared blurred at a distance more than 2 1/2 to 3 feet but the individual in this pilot project had never communicated well enough that anyone ever questioned visual deficit.

Participation in class is now possible through the use of the "Myocom". A person may respond with a "yes" or "no" and be understood by teachers and classmates in any part of the room. As an adult a person could inspect items as they are assembled in a sheltered workshop and electrically record errors made, numbers of items completed, etc.

The device has provided a very effective way of positively reinforcing a youngster for controlling muscle contractions and for relaxing the muscle. Use in physical therapy has been an important concomitant benefit. By using the volt meter,a person can tell how hard he is squeezing. The green light representing a "yes" answer may be set so that it takes a relatively hard squeeze to turn on. This reinforces a person for a good controllable squeeze. The red light representing a "no" answer can be set so that it requires a relaxed muscle in order to turn it off. This encourages an individual to relax and reinforces good relaxing.

Dr. Robert Combs, Director
Dr. Robert Cannell, Co-Director

EFFECTS OF PHYSICAL DISORDERS ON ADJUSTMENT

By Robert Thomas Cannell, M. ED.

ABSTRACT

Project Planning Committee Chairman: Dr. Geraldine K. Fergen

Project Evaluation Committee Chairman: Dr. James O. Smith

Purpose: The purpose of this study was to compare selected adjustment factors of children with permanent physical disorders to the selected adjustment factors of children with temporary physical disorders and to the selected adjustment factors of a control group of children having no known physical disorders.

Method of Research: Twenty children with permanent physical disorders, twenty children with temporary physical disorders, and twenty children with no known physical disorders were evaluated individually on three assessment instruments. The Vineland Social Maturity Scale, the S R A Junior Inventory, and The Missouri Children's Picture Series were used in the individual study of each subject. The scores which resulted from the use of each instrument were recorded and, with the assistance of the University of Missouri Computer Center, the statistical analyses of the data were applied. A two way analysis of variance was applied to ascertain significant differences among the two experimental groups and the control group and differences related to sex.

Findings: Six specific hypotheses were formulated and submitted to statistical tests of significance by analysis of variance. Three of these hypotheses involved adjustment factors as measured by three standardized tests. The null hypothesis was rejected in one of these three cases. The remaining three hypotheses involved adjustment differences on the basis of sex. The null hypothesis was accepted in these three cases.

Conclusions: Within the limitations of this study, it may be concluded that:

1. There was a significant difference in the social maturity level between children classed as having permanent physical disorders and the control group.

2. There was no significant difference in personality test scores between children classed as having permanent physical disorders, children having temporary physical disorders, and children having no known physical disorders.

3. Children with permanent physical disorders, children with temporary physical disorders, and children with no known physical disorders did not differ as to self description of their problems and interests.

4. Boys do not differ significantly from girls in their adjustment to physical disorders in terms of social maturity level.

5. Boys do not differ significantly from girls in their adjustment to physical disorders in terms of personality test scores.

6. Boys do not differ significantly from girls in their adjustment to physical disorders in terms of results of a self descriptive inventory.

Summary of Contributions Made by This Study:

1. Ten year old boys and girls with physical disorders have been compared by means of a sound methodological approach. The study indicated that the greatest area of need for the children with physical disorders is in the area of developing social competencies which include self help skills and socialization.

2. A comparison by sex has been made which shows that there are no statistically significant differences in social maturity, personality, and self descriptive analysis among the children with physical disorders.

Human Engineering of Communications Equipment for the Handicapped

Horace N. Reynolds, Ph. D.
Cybernetics Research Institute
Washington, D. C.

ABSTRACT

Human sensory and performance characteristics should always be important considerations in equipment design, but when the operator is handicapped, human engineering becomes critically important to assure that the individual's strongest remaining sensory-motor capabilities are utilized. Principles of human factors engineering are being applied in current research on systems which enable many severely handicapped persons to communicate more effectively. One of these systems utilizes a separate keyboard unit of only 14 keys which controls an electric typewriter. This keyboard interface employs concurrent dual responses by the operator instead of single sequential responses as with a standard typewriter keyboard. For a handicapped person, the 14-key system offers advantages not only in the reduced number of keys, but more importantly, in the fact that the system can be modified and configured to utilize the operator's remaining motor capabilities. This requires initial assessment of the individual's motor coordination in different parts of the body and a decision about which body movements exhibit optimal control. For example, an individual with reasonably good control of one or two fingers on both hands can operate the basic 14-key system; a person with poor hand-finger dexterity but relatively better control of arm movements can use his fists to operate an interface consisting of large keys spaced far apart; and an individual with poor dexterity and arm control, but good coordination with feet and legs, can use a foot-operated or pedal keyboard. A person with no limb control (e.g., a quadriplegic) can learn to use a tongue-switch interface or a breath-actuated system requiring a code of puffs and sucks on a tube. In every case, the proper application of human engineering principles may enable the handicapped person to utilize his best performance capabilities to communicate through writing, and in the process to develop otherwise dormant intellectual and motor potential.

AN ANALYSIS OF
THE TEACHER COUNSELOR FOR THE PHYSICALLY HANDICAPPED PROGRAM IN MICHIGAN

By

Clifford Magnusson

The Teacher Counselor Program is an ongoing program that serves students in their local public schools whose handicapping conditions warrant a minimum amount of direct service to help them compete successfully with their peers.

General School Laws of the State of Michigan provide that:

> Teachers employed for the program shall possess a valid teachers certificate and, in addition, they shall be approved as a teacher counselor for the hard of hearing, partially seeing, crippled, and/or otherwise physically handicapped in accordance with requirements prescribed by the superintendent of public instruction.
>
> The pupils enrolled shall not be so severely physically handicapped as to require special class placement but they shall need part time teaching and/or counseling in order for them to succeed in their regular classes.

Some Teacher Counselors maintain that the major responsibility is in the area of public relations and they see the role as one in which they encourage acceptance, cooperation, and involvement of school personnel that permits, gradually, a complete integration for the handicapped and tends to change school attitudes and behavior toward students who are physically handicapped.

This study attempts to describe the role diversity of the Teacher Counselor; define the dimensions of the broad role conceived by Michigan's Department of Education; reveal the specific type of role played by Michigan's Teacher Counselors; level of training, major area of approval, most valuable previous training, major area of responsibility, teaching experience; show the uniqueness of this program in the United States; make suggestions and recommendations for applicability in other states and/or school systems; and, suggest future research.

BIOGRAPHICAL SKETCHES

JOHN D. COLLIER, Director of Special Education, Region III of Madison, Jersey and Macoupin Counties.

Formerly Coordinator of Crippled and Health Impaired, Department of Special Education and Educational Consultant to the Pediatric Out-patient Service, both at the University of Missouri - Columbia. Teacher and Head Teacher, Orthopedic Department, Special School District of St. Louis County, Missouri.

Holds the M.Ed. in Special Education and is a candidate for the Ed.D., University of Missouri - Columbia.

MICHAEL T. CHIER. Three years of experience with the Circuit Design and Development Division of National Cash Register Company, Dayton, Ohio. Recently with the Department of Surgery, University of Missouri - Columba. This position included involvement with a National Institute of Health Project on Electrical Defibrillation--and the master's thesis was based upon this project.

Holds the B.S. from Milwaukee School of Engineering and the MSEE from the University of Missouri - Columbia. Is a candidate for the Ph.D. in Bio-engineering from UM-C.

ROBERT T. CANNELL holds the position of Assistant Professor of Special Education at Northern Illinois University and is the University Coordinator in the area of teacher preparation for teaching physically handicapped. He recently completed his requirements for the degree Doctor of Education at the University of Missouri and will receive the degree June 2, 1970. His M.Ed. degree was awarded in 1961 and his B.S. in Education was awarded in 1957, both being received from the University of Missouri. His teaching experience has included regular education and special education of the physically handicapped in St. Louis County, Missouri; Special Education of mentally handicapped at the University of Northern Iowa Laboratory School; part time university teaching at the University of Missouri. His professional experience includes two and one half years as educational director of Woodhaven Home for Handicapped Children, Columbia, Missouri.

HORACE N. REYNOLDS holds a joint position as research psychologist with the Cybernetics Research Institute and adjunct associate professor in the Department of Psychology, Catholic University of America, Washington, D. C. He received his Ph.D. degree in 1967 and his M.A. in 1963 in experimental psychology from Cornell University. His B.S. degree in psychology was awarded by Tufts University in 1962. From September 1966 through August 1969 he served on active duty as a First Lieutenant and Captain in the U. S. Air Force, assigned as a research psychologist to the Human Engineering Division, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio.

CLIFFORD MAGNUSSON, Instructor in Special Education, University of Missouri-Columbia. Coordinator, Area of the Orthopedically Handicapped and the Hospital School Program.

Formerly a teacher of physically handicapped children in school, home and hospital settings. Consultant to the Oakland Public Schools with responsibility for initiating and subsequent supervision of school programs for the physically handicapped. Teacher-Counselor for the physically handicapped.

Holds the B.S. and the M.Ed. from Wayne State University and is a candidate for the Ed.D. from the same institution.

SELECTED BIBLIOGRAPHY

"Myocom": A Communication System for Severely Physically Handicapped. Project report is available from Woodhaven Christian Home, Highway 63 South, Columbia, Missouri, 1970.

Cannell, Robert T. "The Effects of Physical Disorders on Physically Handicapped Children's Adjustment." Unpublished Doctor's thesis, University of Missouri - Columbia, Missouri, 1970

Kafafian, H. Study of Man-Machine Communications Systems for the Handicapped. Cybernetic Research Institute, second Report, February 19, 1970. U. S. Office of Education Project No. 18-2003. (Copies available on request from Cybernetics Research Institute, 2233 Wisconsin Avenue, N.W. Washington, C.C. 20007).

Magnusson, Cliff. "The Michigan Teacher Counselor Program for the Physically Handicapped in Michigan." Doctor's thesis underway, Wayne State University

SYMPOSIUM: Four Educational Approaches to Serving Adolescent Pregnant Girls and Mothers

PUBLIC SCHOOL SERVICES IN A MATERNITY HOME

June Peterson, Head Teacher
Florence Crittenton Home
Seattle, Washington

In the beginning, the types of places we today know as Maternity Homes, were known as Rescue Homes or Missions for Fallen Women, with the emphasis placed on evangelical, rather than social, reform. Inmates were former prostitutes, girls who had been "taken advantage of", or girls from the streets who had no other place to go.

Although other work must have been conducted by individual organizations and individuals, we find the first formal maternity homes beginning in the 19th Century. A combination of renewed evangelical fervor, the rise of socialism in Europe, and the development of philanthrophy have all been partially credited with the new development of social work. To this one would have to add the stirring of conscience in some segments of the public about the secondary role to which women had been relegated and the international fight against white slavery.

Charles N. Crittenton opened a Home for Fallen Women at 29 Bleeker Street, New York City, on April 19, 1883. Because the name was felt to be degrading, it was first changed to the Florence Night Mission; later, for fund raising purposes, to the Florence Crittenton Home. The Salvation Army established its first Rescue Home in Whitechapel, England, in 1884. Morris Cottage, a three story building in the New York City slums was opened in 1886. At first both operations were based on the successful tactics of the Salvation Army organization. Street meetings, music, midnight prayer services, visits to concert halls, saloons, and disorderly houses to rescue girls, took place.

Emphasis in these early rescue homes was on fitting the girls to assume another station--whether by providing some household or domestic training, building up morale, or developing incentive to return to a "decent" life back home. There was little formal education as such in the programs. The evangelical movement developed a greater impetus toward the turn of the century; more and more groups were rescuing fallen women and the Crittenton homes turned all of their attention to the problem of unwed mothers. The Salvation Army focussed one arm of its many social action projects on the problem. Churches continued to set up small group homes and provide shelter.

Over the years several major changes have taken place in maternity homes. Because my topic is "Public School Services in a Maternity Home", I will only pause briefly to summarize what I have seen as major developments in the total program. In the beginning, maternity homes were, as I indicated, evangelical in mood. They provided an opportunity for repentence and rehabilitation, at the same time preparing the girl to become a mother with all of the responsibilities of caring for and supporting her child. Efforts were made to unite the girl and her "betrayer", with marriage urged as the supreme goal. Some vocational training was encouraged. During the course of the first twenty years of the establishment of the homes, with settlement houses being established during the same time, the trend toward professional workers, rather than volunteers, was encouraged in the field of social work. Psychiatric social work began in 1905 when psychologists became convinced that mental illness were influenced by social, economic, and moral conditions in the living experiences of their patients. Following World War I, the psychiatric social workers moved into the Veterans Bureau to work in rehabilitation. In 1922, the Commonwealth Fund financed the establishment of eight clinics in selected cities for experimental purposes in Child Guidance work. The first efforts were with juvenile delinquents; it spread to other child care agencies, including maternity homes. The depression of the thirties undoubtedly had something to do with the decline of maternity service in agencies in that decade; but the number has risen sharply since World War II.

The National Association on Services to Unmarried Parents in 1960 stated that they believed that effective service rests upon five assumptions:

> Any girl, in our culture, who is pregnant and unmarried, or who recently has had a child born out of wedlock faces a serious problem in planning for herself and her child. How she feels and what she does about it will depend largely on the kind of person she is and the quality of help she receives from her family, professional people and others in the community.

Because social service agencies (Maternity homes) have professionally trained people to whom a girl can tell her troubles, who will listen understandingly, and help with decisions, she can be effectively helped in a maternity home. There she should find the following services: counseling, medical care, practical assistance with living and financial arrangements, child care, if necessary, legal assistance, and pastoral counselling. With the expansion of the school programs to the total child in all conditions, educational services have been added to a majority of such homes in the United States. Impetus has come from the school districts--Board and staff~~e~~, from the girls and their parents, and from the social agencies. In a majority of communities in the United States in which maternity homes are located, arrangements have been made between the School Districts and the maternity services for a continuing school program on either a full or part time basis. In the 70's they face a crisis with an increase in the number of out-of-wedlock pregnancies, its increasing social acceptability (especially among peers and young people) lessening the need to hide, although there is no lessening of the need for services; all accompanied by the steeper and steeper costs involved in maintaining any kind of a residence service.

But let's back up a little. Until relatively recently, maternity homes have served chiefly (in the minds of the families using them) as a hiding place, away from the home community, to which a girl could go for help during an out-of-wedlock pregnancy. She received the appropriate medical care, assistance with the baby, and planning for it--accompanied by a large dose of privacy. Often a pseudnom was used; she shunned associates and the public; and her family fostered the idea among neighbors that she was well and healthy somewhere else. Originally, it was felt that the baby and mother must, under all circumstances, be kept together. We find Dr. Kate Waller Barrett, second President of the Crittenton Mission, announcing in her 1894 edition of "How to Conduct a Rescue Home" as a cardinal principal that the main effort of the agency is to prepare the mother-to-be to make a future for herself and her child. In a description of ideal routine, Dr. Barrett included one hour of school or Bible study in the morning; a second two hour study period in the afternoon. This program was provided by the staff or by public spirited volunteers.

The first official record I have been able to find of a public school relationship with a maternity home is 1905, when the Seattle Public Schools noted that they were supplying a teacher on a part time basis to the Florence Crittenton Home. Denver's Home also claims a turn of the century date for its initial school-agency relationship.

Robert S. Barrett, who succeeded his mother as the third President of the National Mission, included a section on the "Spiritual, Moral and Mental Training" in maternity homes in his 1929 volume, The Care of the Unmarried Mother. "An opportunity should be provided for girls of grammar and high school age to continue their education while they are in the home," he stated. He indicated several of the methods that were then known:

> (a.) By sending the girls to a public school in the neighborhood. In many communities, especially in the West, the girls go from the

home direct to the school, where they are not treated differently than other pupils.
(b) By having the city or county school board supply a teacher who conducts regular classes for the girls in the home, either during the day or in the evenings.
(c) By the superintendent, case worker, or volunteer teacher, who assigns regular home lessons and gives instructions. (160)

We find the theory pronounced a number of years ago, therefore, that pregnancy should be no barrier to completion of school and that girls facing an out-of-wedlock pregnancy should not be denied an opportunity to complete or continue their education.

The whole maternity home program suffered a decline during the depression years, but surfaced to face greater problems and a much larger need for service after 1945. Maternity homes found a greater awareness of their services in the community; more trained welfare and other social workers and counselors making recommendation to the clients about services available; a larger number of girls seeking service, and a great demand for adoptive babies. Some agencies did an about-face, looked at the need for the babies, studied the effect on the very young teenager of early motherhood and decided that putting the baby out for adoption was the best solution for the mother and for the baby. In this atmosphere, the maternity home often took on the aspect of a boarding school. The nurseries disappeared; girls went to a local hospital for delivery; and came home ready to return to her interrupted life. With this population, which increased as the "baby boom" hit the junior high and high school age level, the demand for school services increased.

Initial overtures, in most communities, were made through members of the Board of the Maternity Home making their approach to members of the School Board. Parent pressure, public opinion, reports of successful operations in other communities helped in the pressure to establish programs. With one or two exceptions, if the school laws of the community allowed extention of services to the home, programs have been established on a whole or part time basis. In some cities, the agencies have been ~~were~~ forced to hire their own teachers who worked in cooperation with the local district. Programs are handled by visiting teachers, as part of continuing programs offered to hospitalized youngsters, or by permanent assignment of teachers to the maternity home school.

In the agencies, the teachers have found themselves in a variety of roles. There are reports from some programs that no one knew exactly what to do with them; physically, class areas were not established; student involvement not actively determined; and a general staff neglect to utilize their services. Those instances seem to have been few. In the national "chains" where each is rated, the addition of educational personnel and their assimilation as ancillary staff with services to offer to the clients meant an upgrading of the agency. They remodeled, added to, moved out, and otherwise found rooms in which school programs could be established. The pattern seems to be that of expecting the agency to provide the space and the permanent fixtures, such as chalkboards, bulletin boards, cupboards, etc. while the school system provided the equipment, books, and other material.

School agency relationships are carefully spelled out in guidelines sent from the district. Several important elements in the Guideline for Agency Programs provided by the Seattle Schools Department of Special Education include the following:

> All teachers assigned to an agency program are employees of the Seattle School District and are under the direct dupervision of the Director of Special Education.
>
> A child of school age enrolled in an agency which has been approved for an educational program by the Seattle School District is eligible for a school program upon approval of the Teacher or Head Teacher.

A liaison role is established for the teacher, interpreting the policy of the school department to the agency and the agency policies to the schools. She is expected to participate in staffings, attend and prepare reports for boards when called to do so, support the agency program, plan the program of studies, suggest methods of working with students who present special problems, provide an opportunity for a change of attitude towards authority on the part of the children by extending friendship and understanding, to provide an opportunity for the child to learn to appreciate and feel the need for the best education he can acquire, and generally to cooperate without losing the autonomy of the school in the isolation of the agency.

The attitude toward schools in the homes by the students directly reflects the attitude of the staff toward the school. The school areas are frequently the "show place" of the agency where visitors can see the girls happy and active in normal school activities. A problem of attendance in the agency schools is met variously. Some homes depend exclusively upon voluntary attendance. This is bolstered by the need to maintain an average minimum to retain service, and staff members encourage attendance. Other homes, and these seem to be the majority, follow the community compulsory attendance rules, and gently insist that all qualified girls take advantage of the services offered.

As far as the students are concerned, one observation that must be made is the fact that most of the girls in maternity homes, although not all, are younger girls of school age. School is a normal experience. None of the rest of the experience of body changes, pregnancy, clinic visits, etc. is normal. They cling to school--even if they had been previously "dropouts"--as a familiar experience.

Programs offered also will differ with the community, funds available, length of stay of students, preparation of teachers, and interest of the staff. Most of the public school programs have long ago abandoned that early single goal of maintaining the student in her studies at a level which would make it possible for her to return to school with no one the wiser about her whereabouts. The role of the remedial staff working to improve skills to the point where the student is able to achieve success in the agency school program and can expect to return to school~~s~~ with new skills has become important. In a more recent development, some agency people are reporting that the girls who seek residential care today are apt to be "sicker" than girls have been in the past. This would imply a demand for a teacher with a background of working with behavioral disorders, as well as some kind of sociology and psychology, in addition to her academic skills. Utilization of very versatile contract teachers in agency programs or use of regular on-call volunteers who can tutor students individually in advanced math, foreign languages, etc. is important. Probably one of the most hopeful things in the improvement of attitude toward the school program has been the routineness with which girls and their parents expect to find a school program in a maternity home, reflecting the view of the community that this is a normal service. As national chains exchange ideas, meet in programs, or participate in US HEW reports, the public school phase of the maternity programs is generally an accepted part of the report. Expansion of the school program occurs regularly with the expansion of the residence facilities.

The seventies present another phase of the public school program in the maternity homes. Due to a variety of conditions, although the number of girls having children out of wedlock is increasing, the number of beds in maternity homes is decreasing. There is a decrease in the number of girls placing their babies for adoption, thus requiring the confidentiality of maternity home care. In the first three months of 1969, on a national level, 70% of the babies born in the Crittenton homes were adopted. The number is going down and more and more girls are keeping their babies. The cost of residence care is increasing. Nationally, the Florence Crittenton Agencies served over 26,000 girls in 1968 at a total operating cost of almost 7 million dollars. The average cost of residence care for each girl in 1968 was $796.80. With the increase in the cost of living during the past two years and the continuing rise, the cost of residence care goes up. There has been, at the same time, an increase in the number of girls who have come into their local maternity homes, rather than seeking one across the state or two states away. Confidentiality is no longer the prime requisite with a number of families. Additional beds are not needed.

The National Florence Crittenton Association looks forward to a development of comprehensive services to pregnant girls in their communities and is urging the local agencies to examine the ~~ramifications~~ situation. The concept of extended care, with most girls living at home, but coming to the "maternity service center" for medical care, counseling, school program, etc. is being developed. On a small scale the experiment was begun several years ago in a midwest city. One agency, with the cooperation of the public schools, opened its schoolroom doors to girls not in residence, as well as to their inmates. After overcoming problems of intake, transportation, setting up attendance rules, providing additional materials, etc. the program moved along fairly successfully.

For the past two years the 4C's program has been in operation in Chicago. The Crittenton Comprehensive Care Center has offered services to more than 1600 girls who come in for services. There are plans for its expansion.

The national association is urging all agencies to look to innovative plans in their futures. Forward looking agency heads and public school directors are meeting with Model Cities and other community help groups to examine the total needs of the pregnant teenagers in ~~the~~ their community and to see where they can work together. If the Maternity Home is not to become the dinosaur of the modern social welfare system, it must explore new avenues of service. There are certainly advantages to expanding present programs over establishing new programs. Experienced staff and procedures, initial investment in space, materials and equipment have been made. Instead of limiting the school program to the number of girls in the agency, the program could be extended and stabalized to meet the demands of the community, working within a framework of experience.

I do not think that the maternity home will go out of business in any distant future. When the "Pill" was introduced, medical personnel were predicting that maternity homes would be vacant within ten years. In our community we have doubled the capacity of the home and once again have a waiting list. We also have initiated a limited program for accepting day students for school and casework service and are exploring avenues of extending this to the community in greater numbers. A similar prediction -- maternity homes will go out of business -- ~~are~~ is being made with the legislation to relax abortion laws. As long as girls become young women, out-of-wedlock pregnancies will happen and service in maternity homes will be required.

BIBLIOGRAPHY

Barrett, Kate Waller. Some Practical Considerations on the Conduct of a Rescue Home. Washington, D. C.: The National Florence Crittenton Mission, 1915

Barrett, Robert South. The Care of the Unmarried Mother. Alexandria, Virginia.: The National Florence Crittenton Mission, 1929.

Daly, Miss Kay. Talk to Board and Staff of the Florence Crittenton Home of Seattle (Taped) January 26, 1970

Florence Crittenton Association of America, Inc. Standards for FCAA Maternity Home Services. Chicago: The Florence Crittenton Association of America, 1965.

National Association on Services to Unmarried Parents. Mental Health Directory. 1960.

Overton, Mrs. Aileen. Annual Report to the Board, presented at the Annual Meeting, February 17, 1970, Seattle, Washington. (Taped)

Peterson, June. Dr. Kate Waller Barrett: A Friend of Girls. Unpublished Masters Thesis, December 1969.

Seattle Public Schools. Guideline for Agency Programs. 1968

An Educational Program for Pregnant Girls

Vivian E. Washington
Principal, Edgar Allan Poe School #1
Baltimore, Maryland

> "I think the Teen-age pregnant girl should have just as much right to an education as anyone else. In this way I mean that the girl most likely got pregnant by accident anyway. Other people are entitled the right to an education. Some of them are in jail, homes, and institutions for doing things much worse than getting pregnant. A pregnant girl to me is not different than any other person, pregnant or not. Each person is entitled one great mistake once in a life time and maybe this is it. Most teen-age girls anyway feel bad about the matter and would like (I am sure) to have somewhere to go and someone to comfort her and understand her problem and help her face reality. That's why to me (not just because I'm pregnant) it was a good idea to turn school #1 into a school for pregnant girls only. To me the faculty is very nice and understanding, reliable, trustworthy. I think that's what a pregnant girl needs at a time and situation like hers."
> (quote from a student)

Edgar Allan Poe School #1 Program for Teen-age Mothers is a regular secondary public school with grades 7 through 12 and including classes for the mentally retarded in special education classes, girls on a senior high general vocational level, and an ungraded class for girls who plan to go to work.

It is recognized an educational program for a pregnant girl must have medical and social components if it is to be successful. The school uses the medical and social resources of the Baltimore Community. Each girl who enters the program must be registered in a medical facility and every girl is referred for counseling help with a social agency.

Before a girl is transferred to School #1 a conference is held with the girl and her mother or parent substitute. In the conference shared responsibilities are discussed. The school will take responsibility for an educational program. The parent (or parent substitute) is asked to take responsibility for getting the girl to school regularly and on time. The parent is also expected, if the girl becomes ill, to come to the school and take the girl to the hospital. This is the fourth year for the program and in the latter area we have had 100% cooperation. During the winter months the parent is also expected to decide, in case of bad weather, whether or not to send the girl to school. In the intake conference emphasis is also placed upon the fact the girl is expected to take responsibility for herself. As a prospective mother she will have the responsibility for a baby, a human life. You can't take responsibility for someone else without first taking it for yourself.

Everything at the Edgar Allan Poe School is geared toward helping the girl take responsibility for herself. There are rules and regulations formulated by the staff and pupils. The pupils are expected to follow them without someone standing over them. They are not supervised in the halls, dining room, or lavatories. There is a Student Council with representation from each class. The Principal takes problems to them. They bring problems to the Principal. Together attempts are made to find solutions. Regular assembly periods are scheduled where pupils take responsibility for presiding. Opening exercises are held over the intercom system each morning conducted by a student. As the girl takes responsibility for herself, she develops a positive image of self and sees herself as a dignified, important human being.

The quote at the beginning of this paper paid tribute to the teachers. The Edgar Allan Poe Program is fortunate to have dedicated staff members. The program is located in two public schools. In one building there are junior high pupils, the special education girls, and the senior high general vocational girls. In this building there are ten teachers, three teacher aides, three pupil personnel assistants (one of whom is part-time) a secretary, counselor, and nurse. In the other building the senior high pupils are housed. There are twelve teachers, a counselor, a nurse, a secretary, two teacher aides, three pupil personnel assistants (two of whom are part-time). An Art and Music teacher serve both buildings. A Principal, Special Assistant, librarian, library aide, and health aide service the program on a part-time basis in each building. The teachers are in the program because they want to be there and care about the girls. The counselors have group sessions with the girls and on the junior high level the sessions are built into the schedule. It is amazing how much comes out in group sessions!

In the program every girl is respected by every staff member and everything is done to help the girl respect herself and to see herself as a dignified, worthwhile human being. The value of having a program where the whole student body shares the same problem, mainly pregnancy, is that the total environment creates a climate to deal with the problem. In the comment made by the student regarding the school as a haven where "people understood" as much happens outside classrooms as in them. For example assembly programs are planned to be inspirational. Last year it was possible to present a successful young beautician, one of eleven children. She started out as a waitress but decided she wanted something better for herself. She now has her own shop, has won twenty-one trophies as a hair stylist and had won a voice scholarship to the Peabody School of Music.

A former student now in her second year at the Baltimore Community College came to the school recently and asked to sit in on some classes and talk to some teachers. She said "I'm going to be a teacher. When I came to this school I had an experience I have never had before. There were days when I felt horrible. I was tired and didn't feel well but when I went to my classes the teachers did something for me. They made me forget how badly I felt. I want to find out what they did and how they did it. I want to be that kind of a teacher."

The shy timid girl who says "I can't possibly talk over the intercom. I have never done it before" is pleasantly surprised and happy when she finds she can do it and do it well. Every opportunity is made to help a girl feel successful. Every opportunity is used to display the girls' work. The third Sunday in each month there is a Fellowship Hour-Between Us-Mothers and Daughters. Discussions are held planned by girls and parents around questions giving common concern. The program also projects the girls and their work. At the end of the two hour session, refreshments prepared by the girls are served. The school has had fashion shows. At one time a local store loaned the clothes for the girls to model. At our Christmas Tea in December, senior girls modeled clothes they had made.

The program uses many people from the community to supplement the educational program. Every girl must take a special course called "Laboratory for Effective Living". It includes sex information, prenatal care, child care and development, family relationships and home management. Nutrition with this age group is a particular problem. The nutritionist from the Maternity and Child Care Center holds siminars and gives demonstrations. An obstetrician gives seminars to the girls and one session is on contraceptives. He brings samples and the girls are able to have their questions answered. The junior high school is near one of the hospitals. The Director of Pediatrics holds seminars with the girls and takes them to the hospital so that they can go through the delivery room and the nurseries. Graduate nurses in obstetrics help discuss health problems with the new girls on orientation day which is every Friday. Special tutoring is given in reading to some of the girls who have reading problems by a community volunteer.

In both of the schools there is a regular school day. In the morning there is a milk break of fifteen minutes. The girls have milk or juice and graham crackers or ginger snaps. The program has its own cafeteria in the senior high building. Care is given as to the kind of food served. Each lunch is supplemented by a piece of fresh fruit.

The program is in its fourth year. During that time the age range has been from 12 to 20 years of age. There is a difference between the younger and older pregnant girl. The younger girl sees her pregnancy as an illness and it is hard for her to get to school. The girls use public transportation and some of them live a distance from the school. It was found many of the junior high girls had been repeaters and had had poor school experiences. In an effort to help motivate this girl a different academic approach is being used. All of the seventh and eighth grade girls are put in one group. In the morning block they are divided according to reading ability and correlated teaching is done by the English and Social Studies teachers. There are short units of work with content geared towards relevant problems such as Revolution, Community Problems, Youth in Search of Self. In the afternoon block the group is divided according to math ability. The Math, Science, and Family Living teachers work together. In addition the teachers are trying the contract method as a way of dealing with individual differences. The experiment is in its initial stage but seems to be working.

On the senior high level it is necessary to the use programmed materials in some areas. A year ago a need was seen to provide a program for girls who could not return to regular day school. A course was introduced called "Preparation for the World of Work". The courses prepare the girl to go to work. Two pupil personnel assistants work with the girls. Subject content in English and Math is related to problems the girls will face in the work world. After the girl has her baby, she is found work commensurate with her ability. In the first year of the program thirteen girls were placed on jobs.

The program makes it possible for a girl to continue her education while she is pregnant. After the intake conference the girl is transferred to school #1. She attends until she delivers. This age group represents the physically high risk group. Many of the girls have physical complications and have to be out of school. On the other hand there are many girls who have no difficulties and attend up to the day of delivery. The girl may enter any time during her pregnancy. It has been found however most girls prefer to enter as soon as it is found she is pregnant. The pregnancy must be vertified before the girl enters the program. After she delivers she is out of school from four to six weeks. During that time she has a study kit so that she can continue with her work. She returns to the program after she has had her post partum checkup. She brings a statement from her doctor stating it is all right for her to return to school. She is then transferred back to the same or another public school at the end of the quarter or semester. The choice of school is left to the girl and her parent. Sometimes there is a change in the type of educational program. It is felt one of the weaknesses in the program is the need for some type of follow-up when the girl returns to the regular school. As of February 1970, a special services assistant has been hired to act as an "Advocate" for the younger girl and to explore community resources where the girls might get help when needed as they return to school.

From the beginning of the program attempts have been made to reach the natural fathers of the girls' babies. It was felt it would be helpful to have a male social worker available to the fathers. From discussions it has been found the natural fathers have as many problems as the girls. They are concerned about the girl during her pregnancy. They want to find jobs so that they can help financially. They also want to know something about the role they should carry as fathers. Since last November the program has held discussion groups for couples. In the group are young married people, (the program is for teen-age mothers, some are married, some are not, and some marry after they come into the program) and girls and boys who have a continuing relationship. It is hoped the discussions will serve to strengthen the concept of "the family" and provide information that might be included in Family Life Education Curricula to help with the problem of prevention.

Because the medical and social aspects of the problem are so vital, it is necessary to have communication with these resources. Each month conferences are held with representatives of the social agencies. The nurse in each building carries liason responsibility with the medical resources. Ideally it would be wonderful if the medical, social, and educational resources could be under one roof. In a small community with a smaller population this might be possible. In a large urban area such a plan is not realistic if the total population is to be served. Each year of the program there have been 1,300 referrals. The first year the school enrolled 579 girls, the second year 1,226 girls, last year 1,284 girls and over 600 have been enrolled through January 1970 for the present school year.

The program has an Advisory Committee which meets once a month. On the Committee are representatives from the agencies in the community related to the school, parents, a former student, two present students, a junior high and a senior high principal, as well as administrative officials from the central office. The Advisory Committee serves to deal with the program's problems and as a liason to the community.

Perhaps this paper makes an educational program for pregnant girls sound easy. The fact of the matter is that it is extremely difficult. New girls enter every Friday and this is hard for the teachers. The attempt to correlate the medical and social services received by the girls is time consuming. In spite of all the difficulties those people who have worked in the program feel all of the effort is justified because the pupils are so appreciative of the opportunity. As stated at the beginning of the paper for many of the girls it is a "mistake" and since there are no perfect human beings, there is this opportunity to help a girl get back into the stream of society so that she can make a contribution as a dignified respectable human being. In conclusion I close with a quote from another student.

> "We must stop and realize that the girl has made a mistake. She should still have the authority to continue her education, because in this day and time it is very hard to succeed in the world without enough education. It is also wished that a girl be taught so she will be able to teach her own children about life and the things of the world. If the parents don't know you can't expect the children to know but so much. The girl must settle in her mind that she needs the education and put forth her very best effort at a time like this. I think the girl should feel as through she is no different from anybody else and act with more maturity. The pregnant girl should be more than grateful for the schools we have without the schools we would have a majority of dropouts or a large number of girls who would be a year behind in school.

I'm personally thankful for the teachers, they make us feel warm and give us the impression that we are good girls who have made a mistake, but still intend to make the best of ourselves in the future."

****

Vivian E. Washington
Principal
Edgar Allan Poe School #1
April 1970